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EVOLUTIONS IN SUICIDE BOMBING: EXPLORING THE RELATIONSHIP BETWEEN THE TACTIC AND ITS APPLICATION BY NON-STATE ARMED GROUPS ACROSS VARIOUS CONFLICT ZONES OVER TIME

BY

DAVID FIRESTER

A dissertation submitted to the Graduate Faculty in Political Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2023

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APPROVAL

Evolutions in Suicide Bombing: Exploring the Relationship between the Tactic and Its Application by Non-State Armed Groups Across Various Conflict Zones Over Time

By

David Firester

This manuscript has been read and accepted for the Graduate Faculty in Political Science in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

Evolutions in Suicide Bombing: Exploring the Relationship between the Tactic and Its Application by Non-State Armed Groups Across Various Conflict Zones Over Time

by

David Firester

Advisor: Zachary Shirkey, Ph.D.

The following dissertation considers variations in the use of suicide bombing by Non-State Armed Groups (NSAGs), at the organizational level of analysis. It is both a quantitative and qualitative assessment of the conditions under which insurgents that accept the practice's legitimacy have applied it to a range of specified target sets. The broad focus of this endeavor centers on unpacking insurgent groups' behaviors across a number of unique battlespaces, but the main question I seek to answer is: what decision dynamics accompany violent non-state actors' use of suicide bombing and how do we interpret their behavioral interaction across various conflict zones, so as to better illuminate why they continue to attack in this way? Put differently, what does suicide bombing, as an operational-level tactic as opposed to a presumably fully developed strategy, reveal about NSAGs who use it? I also explore a more narrowly tailored sub-set of questions that aim to uncover why insurgents that do use it, do so in different ways, which also entails an analysis of non-suicide bombing attacks against the same range of target sets. To that end, I explore the ways suicide bombing is used by several organizations, within a variety of combat venues, as a means for better understanding its uses; namely, adapting to and shaping, unique battlespaces. I find that organizations such as al-Qa'ida (AQ) are more sensitive to branding/re-branding dynamics associated with the targeting of civilians, while others such as Islamic State (IS) incorporate suicide bombing as a key component of their war arsenal against civilian, security, and competitor target sets. This may explain why it generally tended to be the case in multiple venues that AQ didn't practice suicide bombing against IS, but IS did so against AQ. The exploratory nature of my work can be seen in the methodological approach I take, which extracts data points and re-forms them as variables that can be scrutinized further. This has implications for policy, theory, and epistemology. In policy terms, I elucidate the need to consider suicide bombing as an instrumental means for achieving objectives that are positioned below the threshold of a fully developed strategy. Theoretically, in contrast to a leading explanation for the practice, I am able to say with some confidence that the presence of foreign militaries has had little to no impact on the use of suicide bombing. Epistemologically, disaggregating target types, based on the dataset's existing narratives, is a viable path for better understanding how suicide bombing violence is used by non-state actors.

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I benefited greatly from the oversight provided by my dissertation committee, who challenged me to excise what was least relevant and to develop what was in further need of cultivation and clarity. Their guidance was crucial in carrying my efforts to a point at which they felt my work represented a meaningful contribution. The process, although intellectually strenuous at times, was a necessary one. I also gained immeasurable insight from my discussions with scholars Benjamin Acosta and Assaf Moghadam, who were kind enough to make time for me during my intellectual journey. Their work has inspired much of my own.

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ACRONYMS

ACLED – (Armed Conflict Location and Event Data)

AQ – al-Qa'ida

AN - Al-Nusra – this is the insurgent group that al-Qa'ida established in Syria in 2013, which split from its Iraq brand AQI (al-Qa'ida in Iraq) and later was renamed Hay'at Tahrir al-Sham. Al-Nusra is used in accordance with the GTD's naming convention. Under the AN name it may also appear as Jabhat al-Nusra (or JN). Some scholars use the acronym JAN as well.

AO – Area of Operations

APC – Armored Personnel Carrier

BBIED – Body-borne Improvised Explosive Device (the suicide bomber wears the bomb)

COIN – Counterinsurgency

COW – Correlates of War dataset

CPOST – The Chicago Project on Security & Threats, formerly known as the Chicago Project on Suicide Terrorism, hosted by Chicago University

DSAT – Database on Suicide Attacks (formerly known as the CPOST dataset).

ETA- Euskadi Ta Askatasuna [Basque Homeland and Liberty]
FSA – Free Syrian Army

GTD – The Global Terrorism Database, produced by START

HTS – See AN.

IED – Improvised Explosive Device

IFV – Infantry Fighting Vehicle (an enhanced APC)

IRA – Irish Republican Army

ISIL – The Islamic State of Iraq and the Levant, as it appears in the GTD's naming convention. Its parental lineage includes AQI (al-Qa'ida in Iraq) and later ISI (the Islamic State of Iraq). The group is also known as ISIS (Islamic State of Iraq and Syria), al-Dawla (the short form for "the state"), or Daesh (derived from its Arabic name), or simply IS (the Islamic State).

Jabhat al-Nusra – See AN.

JRTN – Jaysh Rijal al-Tariq al-Naqshabandi

LTTE – Liberation Tigers of Tamil Eelam (AKA: "Tamil Tigers")

MCTR – Military Council of the Tribal Revolutionaries

MMO – Mapping Militant Organizations, produced by Stanford University (Center for International and Security Cooperation).

NSAG – Non-State Armed Group

PFLP – Popular Front for the Liberation of Palestine

SAD – The Suicide Attack Database, produced by CPOST

SAND – The Suicide Attack Network Database, produced by Benjamin Acosta

SDF – Syrian Democratic Forces

START (National Consortium for the Study of Terrorism and Responses to Terrorism), GTD (Global Terrorism Database) retrieved from https://www.start.umd.edu/gtd.

SVBIED – Suicide Vehicle-Borne Improvised Explosive Device (the vehicle is intended to detonate *with* the attacking party inside of it)

TTP – Tactics, Techniques and Procedures. This term is typically used when describing both terrorist and insurgent behaviors. It should be understood that there are some TTPs that remain constant from one AO to the next and some that do not.

UCDP PRIO – The dataset compiled by the Centre for the Study of Civil War (CSCW) at the International Peace Research Institute, Oslo (PRIO) and Uppsala Conflict Data Program (UCDP).

VBIED – Vehicle-Borne Improvised Explosive Device (the vehicle is intended to detonate *without* the attacking party inside of it)

YPG – Kurdish "People's Protection Units"

Preface

Acts that capture the public's attention tend to be bloody and seemingly senseless. Take for instance the myriad assaults on American schools, such as Columbine, Sandy Hook, or Uvalde. Others might instantly recall September 11, 2001, the "Shoe Bomber" or the "Underwear Bomber."[1] Perhaps it is the case that violent events occurring more recently, or closer to our physical or emotional living space, remain foremost in our minds. Perhaps it has become common to expect that certain types of people or groups tend to attack certain types of targets in particular ways, because Twenty-First Century media portrays these tendencies in such an easily observable, and pre-packaged, way. Consequently, the layperson, and sometimes the learned scholar, views such actions as either criminal misdeeds or manifestations of terrorism.

In the case of suicide bombing, thousands of people have used the tactic, on occasion striking a few high-profile targets in the West, but it is far more routinely wielded against a wide range of entities within modern conflict zones. It would seem, then, that these acts are committed with a purpose in mind, and therefore deserve (and have received) serious attention. Many have approached the topic in ways that have advanced our understanding; some by positing bold theories, others by chipping away at them, and many by analyzing pockets of violence at a more micro level. I approach the topic by analyzing the types of targets that are attacked with self-guided explosive humans. I do this not only to discover what intent its perpetrators seem to have in mind, but to answer some questions that arise when major behavioral changes are observed over time. In short, I build toward a theory, but mainly engage in an exploratory endeavor.

Rarely does anyone investigate targeting behavior by comparing the findings that two separate datasets reveal when targeting behavior is scrutinized in this particular way. In this dissertation, I aim to disentangle actions that many might agree are a shocking, instant, and very lethal form of violence, from the classes of targets against which they are deployed. I do so by analyzing targeting preferences across several violent conflicts. It is by this means that I hope to add some clarity to the organizational thinking involved in what some might view dismissively as senseless acts of terrorism. Suicide bombing is neither senseless, nor does its use inherently constitute an act of terrorism (although it sometimes may). Nonetheless, it is a peculiar form of violence, which seems to be in need of some further investigation.

[1] Few, however, would recall the one-off events that do not fit neatly with the exceptions to established stereotypical rules, such as the multiple bombs coupled with a suicide truck bombing on May 18, 1927, that were carried out in Bath, Michigan, by a middle-aged man, with a locally derived political grievance. Many seem to have already forgotten about the 2020 Christmas Day SVBIED event in Nashville, TN, as the FBI had declared it to be an individual's preferred means of committing suicide.

For Joshua and Abigail

Chapter 1: Introduction

Although a number of NSAGs (Non-State Armed Groups) have embraced suicide bombing as a technique in their repertoire of violence, the result of this adoption has varied among them. Some have largely discontinued the practice (e.g., Hezbollah), used it sparingly (e.g., core al-Qa'ida), partially decreased its use (e.g., the Haqqani in Afghanistan), while many others have altered its use by increasing its frequency and expanding it to a range of target sets (Islamic State). In this dissertation, I address the tactical application of suicide bombing as a means of adapting to, and shaping, the combat environment faced by a variety of non-state fighting entities. Studying this type of attack in such a way sheds light on how a variety of adherents of this form of warfare are themselves formulating strategies (if they are at all) that they believe will generate victory, defeat, or even stalemate.[1] The difficulty of such an exercise is that one may never unearth whether they truly believe either of those end-states, or "outcome goals," will result from the use of suicide bombing. However, analyzing their behavior through a tactical prism does hold some promise for gaining visibility into their shorter-range objectives, or what some call "process" or "intermediate" goals.

In the past, the study of suicide bombing has typically been accompanied by myriad challenges. For instance, Crenshaw (2007) identifies a number of weaknesses in the academic rigor being applied to several suicide bombing studies. She notes that a.) the incompatibility of suicide terrorism databases has hindered its treatment by academics, that b.) few scholars have compared intra-organizational variations in choosing attack type (suicide vs. non-suicide "terrorism"), and that c.) rarely have scholars considered variation in the target set (e.g., civilian, security, political, etc.).

[1] There is always a possibility that a clear victory isn't actually sought. For instance, a stalemate might be understood as a means of attrition that may cause the enemy to seek a diplomatic solution or concede on some favorable grounds. It might also be desirable to delay victory so that other forces will have an opportunity to be brought to bear (e.g., solidification of external alliances/sponsorship, or a consolidation of power internally).

The roadblocks Crenshaw observes continue to persist to some degree, but there has been some meaningful advancement in the study of suicide bombing that has reduced or eliminated a good portion of them. My own work moves along that trajectory, as I consider how the vertical (more use) and horizontal (across conflict dyads) proliferation of suicide bombing has increased sharply over time. This fact alone is worthy of exploration (Pape, Rivas, and Chinchilla 2021), but I go beyond that task by scrutinizing target sets as a pathway for discerning variance in both suicide and non-suicide attacks. I do this by making use of two main databases: GTD (Global Terrorism Database) and ACLED (Armed Conflict Location and Event Data), yet I consult other datasets, such as SAND (Suicide Attack Network Database), CPOST (Chicago Project on Security & Threats), and DSAT (Database on Suicide Attacks), to resolve issues with the main two and to improve internal validity for the additional variables I subsequently create (Physical Challenger Threat, Number of Bombers, Combined Arms, & Vehicular). This analytical approach enables me to gain some meaningful insight into the possible intent of the entities that, under certain conditions inherent in the threat landscape, accompany either attack type's use against a variety of target types.

The Argument

The research question this dissertation considers is centered on the use of suicide bombing by NSAGs: *what does suicide bombing, as an operational-level tactic, reveal about NSAGs who use it?* The question is derived from the observation that despite its apparent uselessness in achieving long-term strategic goals, the number of suicide bombings has increased over the past decade at an astonishing rate, particularly within and across insurgencies. The empirical evidence I consider reveals that the tactic has not been applied evenly, nor identically, since its first modern use in the early 1980s, as is regularly noted by a number of scholars (Pedahzur and Perliger 2006; Lewis 2012; Buckley 2018).

Although suicide bombing is often considered a tool of "terrorism," and when used against noncombatants many forms of violence could be, its distribution among a variety of target sets (civilian, security, competitors, and political) call that labeling into question. This variance alone deserves closer scrutiny, but rather than ask why individuals or groups adopt the practice, I'm interested in understanding how and why it's exploited once an organization possesses it as a weapon in its tactical toolbox. I approach this task by looking at *how* it has been used in a variety of ways, to serve disparate groups' interests, at various times.

I argue that suicide bombing is used against different target sets (selectivity), to achieve a range of intermediate objectives (e.g., signaling the balance of power and/or terrorizing a designated enemy), derived from organizations' unique perceptions of what is required to meet them. Analyzing the choice to attack certain types of targets at given points in a conflict, and how those targeting prerogatives change over time, provides a means for uncovering some aspects of strategic reasoning.[2] At least two types of reasoning seem to be at play, particularly within a combat environment (as opposed to a random one-off attack). Force can be used to adapt to threats (a response to environmental changes) within the battlespace, such as balancing against the state, an intervening state, or a competitor organization. It can also be used to shape the conflict environment (an offensive means of causing environmental changes), such as causing a reaction by the state or

[2] I would like to clarify various forms of the words "strategic," "strategizing," and "strategy" as they appear throughout my work. When I use terms such as "strategic" with an appended participle such as "reasoning," or when I refer to "strategizing," I am referring to a deliberative process that is undertaken by an entity or individual, which can occur at any level of analysis and any level of war. For instance, a group may consider any number of force (or non-force) options to be applied to a target or target set, whether they are used in a battle (tactical level), a series of battles (operational level), or a war (strategic level). In this case, strategizing is a more abstract concept, because it may include any number of inputs at various points along a continuum. If, however, a group seizes upon a particular force (or non-force) option, which they feel will serve their overall aims (non-violence, offshore balancing, or long-range bombing), then they are leveraging the option as a primary means to achieve a desired end-state. In this case, they have a strategy that relies on a tactic, as I discuss later. If I refer to an outcome as being a "strategic" victory or defeat, it is more likely that the attached sentiment describes an irreversible end-state circumstance (e.g., an army is surrounded and capitulates, or a country's satellites are rendered unusable as a means to conduct GPS-based targeting upon which it may heavily rely).

civilian population. Both can be true simultaneously, but, as I will later explain, a targeting pattern that demonstrates selectivity for one set over another can be viewed as an indicator of a dominant reasoning paradigm at given points in time.

Often regarded as a low-tech/high-yield solution, suicide bombing seems to be a potent option for both adaptation and shaping efforts.[3] Neither pathway excludes the other, and they often seem to be simultaneously occurring. For instance, one can both parry a blow while advancing on an adversary's weak point. Disaggregating the target sets against which it is used enables one to see more clearly where emphasis is being placed over the course of a conflict, which is to say that an analysis of patterns of distinct behavior holds some promise of demystifying a seemingly peculiar force preference.

My inquiry takes place within a broader context, typically addressed by the literature on terrorism and, more recently, insurgencies. Answering a question that speaks to one of the most devastating attack types (whether measured by some analysts in terms of casualty rates or by victims experiencing its sudden and surprising speed) should resonate for students of both fields of study. Indeed, what seems to have emerged from much of the literature on suicide bombings is similar to some of the knowledge that has been advanced by studying terrorism and insurgencies in that there is often an idiosyncratic logic that tends to hamper generalizability. Nonetheless, glimmers of what amounts to truisms do tend to stack up over time and any contribution toward that end is worth serious effort.

[3] The standard military definition of a "shaping" operation tends to depict it as being wielded in support of a decisive action. However, I am relaxing that definition here to include it as serving in a supportive role for any number of desired outcomes (e.g., military, political, or even public opinion).

The relevance of this research program also has implications beyond the social sciences. For instance, in the military sciences, where the use of suicide bombing has been treated as both a strategy choice and technological diffusion topic, my work speaks directly to how it is being employed. It is also germane to policy discussions that center on responses to non-state violence. Advancing a core base of collective knowledge, while reducing ambiguity, should aid in better decision making; particularly with respect to countering a rather pervasive threat behavior.

As a distinct field of inquiry, my aim is not to resolve the scholarly arguments that have treated the decision to use suicide bombing *at all*, although I examine their sum and substance. Rather, I explore the practice in a way that seeks to better understand the various distinctions between suicide bombing practitioners' use of the attack type, which includes an analysis of how its use has varied over time. Such a rarely explored question is relevant in two ways. First, by measuring the relationship between suicide bombing (as an attack type) and target set variation (the aforementioned four target types), enables me to present a "target typology" model for inferring the underlying causal logic its practitioners employ.

Secondly, I consider whether suicide bombing coincides with, or diverges from, other specific forms of attack, in order to learn how its use has changed over time (e.g., as a tool of pure "terrorism" or militant insurgency, but see J. Lewis 2016 for its consideration in both senses). This opens some exploratory avenues such as whether an organization's tactical shifts are predicated on internal logic (e.g., branding, re-branding, solving collective action problems, etc.), external conditions (e.g., the degree to which a target poses a threat or over which dominance is desired), or both (e.g., responding to high rates of failure).

My investigation into the dynamic application of suicide bombing generates some meaningful implications that speak to the choices surrounding its use, across a number of conflict zones, and for a number of groups who have adopted it. My findings generally support the notion that each battlefield presents some distinctive challenges and groups that adopt suicide bombing tend to vary its use in ways that respond to, or impact, their unique environment, conditional on the objectives that can be deduced by observing and analyzing target discrimination. For example, I find that Islamic State (IS) exhibits a penchant for including suicide bombing at every level of war and does not appear to exercise limitations on the range and type of targets against which it aims its efforts. Al-Qa'ida (AQ) core uses suicide bombing sparingly, but its subsidiaries in Syria tend to exercise more target selectivity over time as part of a re-branding effort that centers on growing its legitimacy. Although IS and AQ share a similar desire to establish an eventual "Islamic State," their behavioral distinctions reflect the degree to which each is willing to bide its time. IS seeks complete dominance over civilians, the state and competitors, and uses suicide bombing as a means to arrive more swiftly at that goal. AQ builds local relationships, alters its image to suit its role as a guerrilla fighting force, and uses suicide bombing in a more selective manner.

Scope

My dissertation's scope is specifically focused on NSAGs engaged in suicide bombing. Although NSAGs might behave in a state-like fashion, I am setting aside the state-sponsored or state-driven "terror from above,"[4] in accordance with modern norms of analysis. In this way, I'm

[4] Among many who may use this terminology, I have in mind Hacker (1981) specifically. I recognize that there are varying arguments about what constitutes a state and whether an organization such as IS would fit within that mold. Hintze (1975), Jones (2016), and Stewart (2018) are instructive in terms of state formation, which might in some way seem applicable to IS. However, I think that IS's declaration of statehood, along with their having held territory, administered (often brutal) justice, and provided services, might lead some to make the claim that they were behaving as though they were a state. I do not agree with that assessment, however. IS was engaged in a wide-scale insurgency that sought to obliterate borders well beyond their immediate AO, while usurping the authority of long-standing governing

making an analytical distinction that defines the units of analysis under consideration: NSAGs and the targets they attack. This is not to say that states do not impose violent costs on those who seek to wrest control of, or otherwise disrupt, their sovereignty. As the entity that stands to lose exclusive control of legitimate violence within a given territory, similar to a Weberian ideal-type definition, one would expect that they do exercise violent options to retain their sovereignty. However, I am more interested in learning about the actions associated with suicide bombing, which is an exclusively non-state pursuit.

If there is a preeminent lesson to be learned about violent insurgencies, it is that no two are identical and, even within a single insurgency, a balance between population-centric and enemy-centric approaches must be struck by the counterinsurgents. That seems to be the received wisdom from much of the counterinsurgency literature. Yet, when we look at insurgents' behavior, they too appear to make choices about their targets and those preferences are not static over time. The datasets I consider have made that clearer to me and I demonstrate this clarity via charts, graphs, descriptive and inferential statistics. I look at several combat theaters, with an eye toward interpreting suicide bombing NSAGs' targeting behavior.

A Word on Semantics Surrounding NSAG Violence

In the literature regarding NSAG violence, one often comes across confusing dichotomous depictions of either "terrorism" or "guerrilla warfare." Attempts to distinguish between the two can

authorities. They had not completed their project, but were constantly engaged in forming into reality that which they declared in advance had already existed. In short, they were in a state of contestation for ground truth and not in a position of uncontested established rule; at least not for very long if they were.

be a difficult task (Chenoweth 2013, 373; Walzer 1992, 176-206). The core difference, as I see it, is whether civilians or non-civilians are being targeted by NSAGs. One often finds throughout history that while most insurgents practice guerrilla warfare, many also use terrorism (Thornton 1964; Merari 1993; Boot 2013, 2014; Asal & Wilkenfeld 2013; Stanton 2013; Moghadam, Berger & Beliakova 2014; Fortna 2015), which Carr notes is "a form of warfare" (2003:12). My own tendency is to view civilian targeting as more closely associated with terrorism and non-civilian targeting as more akin to guerrilla warfare. However, when encountering a scholar's use of either term, I tend to place them in quotation marks so that I do not alter the meaning of their work to suit my own bias. In either case, I abide by the principle that useful knowledge with clear policy implications can be developed through a distinction of the types of targets that NSAGs attack (Carter 2016; Ramirez & Robbins 2018).

Additionally, I have a tendency to use the terms "insurgents" and "NSAGs" interchangeably, whereas some scholars choose to call them "rebels." In either case, I am referring to a category of armed and violent nonstate actors, whether engaging in "terrorism" (civilian-centric targeting) or "guerrilla warfare" (security-centric targeting), who compete with states (and other nonstate actors).

Dissertation Structure

The dissertation proceeds with the following chapter's literature review, which focuses on NSAGs' behavior; specifically, those who use suicide bombing. In the next chapter, I develop a theory, or at least a proto-theory, in support of the empirical exploratory exercise I later carry out, along with the methodology I employ, which consists of a sub-discussion on decisions I had to make and the analytical approach I took. Each successive chapter consists of an empirical analysis of

a theater of combat in which suicide bombing is, or has been, employed. They each feature two separate analyses from two distinct databases (GTD and ACLED), with a concluding section on the lessons that can be drawn from both of them. I then offer a concluding chapter that re-states my general findings. The chapter also evolves into a discussion of the significance of IS (Islamic State) and whether there is something to be learned by considering how that group, being a major transnational practitioner, has used suicide bombing across conflict zones. Some policy considerations and suggestions for further research are presented as well. Finally, a robust bibliography is presented in support of my work.

Chapter 2: Literature Review

Introduction

The literature on suicide bombing has grown since the 1980s, alongside the practice itself. For a time, research on the topic had been (mainly) confined to terrorism studies, but as the tactic has been increasingly used in insurgencies, it seems more fruitful to study its expansion into that realm as well. This is fitting, as its first modern use appeared during the Lebanese civil war.

In order to better understand the conditions under which the use of suicide bombing varies and the reasons violent organizations operationalize it in different ways, I begin by explaining the importance of looking at NSAG behavior as being independent of state actions. I then assess the literature on suicide bombing and how it has evolved over time. Following that, I consider how scholars have disaggregated NSAGs' targeting preferences, beginning with an evaluation of their findings for suicide bombings, but extending the conversation into the realm of "terrorist" decision making, even when suicide bombing is not used. I scrutinize the data surrounding the suicide bombing phenomenon and consider how suicide bombing's use has proliferated and become such an integral part of some insurgents' war arsenal. This effort leads me to conclude that organizational decisions on its use can be better understood by disaggregating target sets over time, within a given battlespace. In the chapter that follows, I later develop a typology of suicide bombing that depicts the possible aims it might serve. This approach, which is manifested in the remaining chapters, enables me to conduct what some term "exploratory" research (Buckley 2018, Swedberg 2020), which bolsters a theory-proposing approach.

NSAGs Versus States: Firing Causal Arrows is Inferior to a Target-Centric Analytical Practice

I have observed that many studies of insurgency and terrorism tend to look at NSAGs, or their actions, through a lens that attributes some responsibility to state actors' own actions (e.g., Polo 2020). That is, the causal chain that brings about non-state violence is sometimes depicted as though it were routinely dependent on the incumbent's behavior. This may often be the case, given that each side in a conflict must consider its opponent's actions and reactions, while maximizing the impact of their own. Yet, even when acknowledging bidirectional causality, scholars and laypersons might still be prone to prescribe a unidirectional treatment that places the onus on either side to temper their responses to an opponent's attacks, lest their *perceived* lack of restraint be seen to "cause" more attacks.[1] Often, it is the state that is implored to do so, as states are understood to have resources at their avail and can supposedly exercise restraint without experiencing a palpable loss. On the contrary, insurgents that accept violence as a pathway to success *must* act in some capacity to remain relevant competitors; their quiescence signifies their death.

In terms of incumbent-insurgent relations, asserting causality isn't merely the province of conflict observers, but also of those who are party to them.[2] There is something to be gained by portraying one's *own* actions as though they were dependent on *another's*; particularly when the outcome is condemnable (e.g., civilian mass casualty events). Both NSAGs and states may make great use of the propagandistic value associated with the other's "collateral" damage. They may

[1] For instance, even though Bloom (2007) introduces a seemingly robust outbidding thesis about interorganizational competition between terrorist groups, she nonetheless places the burden on Israel for Hamas's force escalation. She does this repeatedly throughout her work and does so specifically on 44, when she states, "… Israeli policy must change before the violence will end." It was not necessarily Israel's use of force, but quite possibly its ability to undermine the efficacy of Hamas's terrorist attacks that generated a shift in the group's ploy for domination within Gaza (Frisch 2009).
[2] One can readily observe in individual "he started it" allegations that blame is often cast on one's adversary.

amplify the appearance of civilian suffering at the hands of their enemies so as to justify their own violent actions.

For insurgent forces, it seems to be a common insight that they seek to coax incumbents into overreacting (provocation), or to depict the state as imposing undesirable conditions upon the populace. The resulting state actions can be interpreted by the citizenry as an affront to their sensibilities or a hindrance to their well-being. A standard theme of provocation in the literature holds that the aim of NSAGs is to carry out acts of extreme violence against either the government, civilians, or both, in order to elicit a violent state response. The result of this blame-deflection is a justification for violence, as each side tends toward capitalizing on the ability to *depict* the other as overreacting, whether or not they *actually* are.[3]

For states, many behave badly toward their own people, despite whether an insurgency is afoot (a long list of offenders should intuitively come to mind). However, few have satisfactorily explained just why civilians will come to see the state's actions as more egregious than those of the "terrorists" and decide their allegiance accordingly. Some have explained that violence can be a catalyst that will force civilians to choose the side that they believe will harm them least (Cross 1963; Kalyvas 2006), which seems to make intuitive sense, but there are many occasions that don't fit neatly into this framework. For example, one may choose not to upset the state because the value of its coercive capacity exceeds the prospective rule by an insurgency with whom the civilian has more

[3] I have in mind the many instances, some of which are described by Bard (2017: 329 – 330; 2020: online version page number unavailable), in which a state is shown as being an aggressor when the opposite is the case. The images seem to inflame the senses, as outrage for atrocity supplants a more cautious investigation of the facts as they are and not as one would like to believe them to be. To be sure, the ability to be provoked exists in many conflicts and states do fall into the trap, but there are some limitations (Blankenship 2018).

in common. It is also true that many insurgents mishandle civilians and do so for reasons that are unrelated to their relationship with the incumbents (Humphreys & Weinstein 2006).

Not every aspect of state response(s) to "terrorism" or insurgency (whether suicide bombing or other forms of violence) is an act of repression, although there is a tendency by some scholars to quantify many state actions as though it were (Lyall and Wilson 2009; Horowitz, Perkoski, and Potter 2018).[4] States may often conduct offensive operations against NSAGs for defensive reasons, which may actually serve to reduce the latter's capacity to harm the state (Braithwaite and Johnson 2012). Consider an attack by an insurgent organization on, say, a civilian funeral procession. For argument's sake, imagine this evokes a physical response by the state, say, an airstrike on an insurgent stronghold. If it doesn't harm civilians, it shouldn't logically offend them, especially if their fellow compatriots may have suffered at the hands of the NSAG(s) that their own government, whether liked or disliked, has responded to with violence. However, if the propaganda emanating from insurgents can effectively convince the people, or can impact global opinion where it counts, that the state killed innocent civilians, the balance sheet looks less favorable for the incumbents.[5] Hence, even an iterative process consisting of civilian-centric targeting by insurgents and threat-

[4] Repression seems to have a negative connotation when used in the literature. The sentiment I have in mind is probably most closely associated with what might be better defined as "oppression." For instance, repression might be understood, in terms advanced by Besley and Persson (2009: 292), as "… one-sided use of violence by the incumbent government to stay in office, effectively repressing any latent insurgency by the opposition." Although their definition includes the term "repression" itself, they would probably agree on the implicit negative meaning it bestows upon a state entity. I'm not alone in my judgment about using the term "repression," as Asal et al (2018: 22; note 7) do not use the term for similar reasons.

[5] That narratives often carry more weight than facts is perhaps an understatement. For example, many mistakenly believe that the use of UAVs (Unmanned Aerial Vehicles; AKA "drones") cause disproportionate civilian deaths. However, as has been my personal combat experience, the opposite is true. Morrell (2015: 137 – 141) does a far better job of explaining why this is the case, which is supported by his former status as one of the highest-ranking members of CIA. Byman (2013: 37) touches upon the subject as well, in specific reference to Pakistani civilians' perspectives on the use of UAVs.

centric targeting by states can be manipulated in such a way as to diminish the state's stature and enhance that of the NSAGs'.

Less powerful insurgents must find ways to undermine the dominance of the state by causing them to cede power and control, the primary commodities that determine who is in charge and the criteria by which insurgent victory is typically defined. However, NSAGs not only compete with the state, or "security" elements, but often with other NSAGs, or "armed competitors" as I term them. Violent activities might be related to opponents' actions, but as I noted above, they might not. For instance, Wood and Kathman (2015) look at civilian targeting by NSAGS as a means to compete with other NSAGs, or in response to the state's loss of territory (Hoffman, P. 2019). The inherent threat-relevant capabilities (latent or actual) possessed by security forces and armed competitors may often comprise the impetus for insurgents' strategies, tactics, or shifts therein. In essence, decisions to use force are probably more related to what I later discuss as a balance of force/balance of threat consideration.

Additionally, NSAGs can act violently for reasons unrelated to incumbents' actions (and vice versa) because complex violent conflicts may also involve unilateral decisions, by either side, that are made independent of the other's actions. While I do not treat any organization's actions as necessarily dependent on those of another, nor would I assert that they occur in a vacuum, for the foregoing reasons I am reluctant to grant either side much initial causal weight for decisions made by their opponents. Therefore, I use a target-centric methodology to better understand what might be driving insurgent groups' violent actions over time; especially for those who practice suicide bombing.

Studying Suicide Bombing: The Landscape

Below are some general descriptive statistics, which are emblematic of two interesting facts that gave rise to my inquiry. The first, consists of a year-over-year trajectory of the practice, or its vertical escalation. The second, shows its cross-border spread from a limited number of places to a broader, multi-theater, phenomenon, or its horizontal proliferation.

Graph 1: GTD Data on Suicide Bombings Per Year, 1981 – 2018 (N = 7,011)

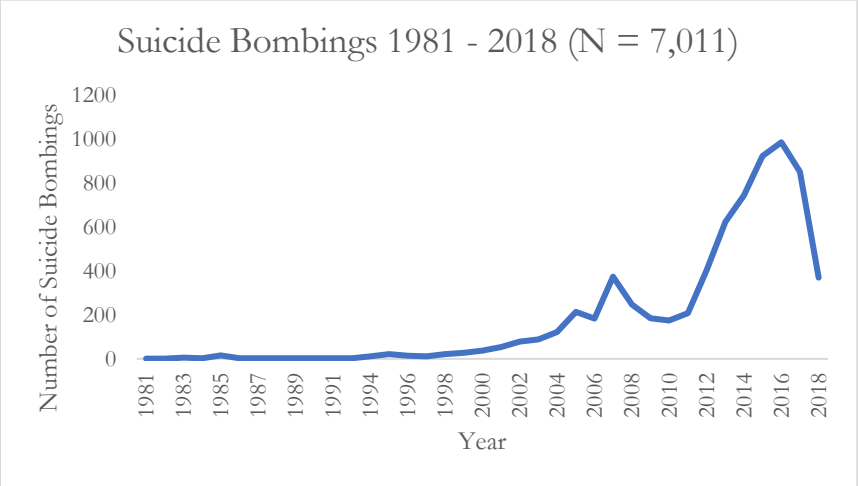

Table 1: GTD Data on Suicide Bombings Per Country, 1981 – 2018 (N = 7,011)

Country	Suicide Bombings	% Share
Iraq	2668	38.05
Afghanistan	1339	19.1
Pakistan	536	7.65
Nigeria	449	6.4
Syria	364	5.19
Yemen	225	3.21
Somalia	218	3.11
Israel	125	1.78
Libya	121	1.73
Sri Lanka	114	1.63
Cameroon	99	1.41
Russia	90	1.28
Turkey	76	1.08
West Bank and Gaza Strip	71	1.01
Egypt	68	0.97
Lebanon	65	0.93
India	62	0.88
Mali	39	0.56
Algeria	33	0.47
Saudi Arabia	25	0.36
Indonesia	23	0.33
China	17	0.24
Chad	15	0.21
United States	15	0.21
Niger	13	0.19
Bangladesh	13	0.19
Iran	12	0.17
Tunisia	11	0.16
Morocco	11	0.16
Philippines	10	0.14
United Kingdom	7	0.1
France	7	0.1
Kenya	6	0.09
Uzbekistan	6	0.09
Jordan	5	0.07
Colombia	4	0.06
Ukraine	3	0.04
Kuwait	3	0.04
Mauritania	3	0.04
Belgium	3	0.04
Spain	2	0.03
Argentina	2	0.03

Country	Suicide Bombings	% Share
Netherlands	2	0.03
Kazakhstan	2	0.03
Uganda	2	0.03
Tajikistan	1	0.01
Mexico	1	0.01
South Africa	1	0.01
Australia	1	0.01
Sweden	1	0.01
Montenegro	1	0.01
International	1	0.01
Finland	1	0.01
South Sudan	1	0.01
Croatia	1	0.01
Canada	1	0.01
Qatar	1	0.01
Djibouti	1	0.01
Burkina Faso	1	0.01
Tanzania	1	0.01
Czech Republic	1	0.01
Germany	1	0.01
Armenia	1	0.01
Brazil	1	0.01
United Arab Emirates	1	0.01
Bulgaria	1	0.01
Ethiopia	1	0.01
Panama	1	0.01
Italy	1	0.01
Azerbaijan	1	0.01
Myanmar	1	0.01
Kyrgyzstan	1	0.01
Grand Total	**7011**	100

As the above graph demonstrates, suicide bombing is a phenomenon worthy of study if just for its year-over-year vertical proliferation. As the table demonstrates, horizontal proliferation is lopsided in that it is not confined to any particular country, even as it is found in greater quantity in a few. These two observations lead me not to question why it is so popular, but how it is used to respond to (adapt) or impact (shape) the battlefields in which it is being deployed. To that end, I first establish my level of analysis, then I provide a brief background on the state of the literature and its development over time, as well as some of the essential debates and emerging concepts it has produced.

Level of Analysis

Before considering developments in the study of suicide bombing, I'd like to explain my level of analysis choice. Structurally speaking, when tactics are coherently threaded together, they may add up to a strategy. Hierarchically, strategy resides at the macro level and seems to center on the means by which a broader plan or policy is carried out (Liddell Hart (1991 [1954]: 321). Below that, we find the micro level of tactics (e.g., individual battles). Between the two, however, lay the meso level of operations (e.g., a string of battles in a region). It seems that many overlook the operational level of combat (Luttwak 1990) and focus on what they perceive to lay above or beneath it, but this is precisely the level of analysis that "reveals the enemy's style of warfare" (Shultz & Dew 2006: 21). It is this operational-level position within the structure where suicide bombing as a tactic seems to be used within insurgencies.

In terms of units of analysis, my investigation of suicide bombing is largely confined to the study of violent organizations at the expense of an analysis of individuals, as McCormick and Fritz (2010) suggest would be more fruitful. There is always room for an individual-level analysis, as

people must themselves perform the acts (often willingly, but sometimes under duress or as victims of remote detonation). Focusing on individual suicidal risk factors surely has a place in the literature (Lankford 2014; Varaine 2020), but as Qazi observed (2018), studying individual motivations is a murky endeavor.

Investigating individual motives would have seemed an appropriate approach when the phenomenon was novel and the organizational elements were less patent. However, as a number of datasets have expanded to include group assignment for the attacks that have been occurring, while the number of attacks has risen substantially, the enlarged sample set makes observations at the organizational-level more stable. It is an attractive characteristic to consider if understanding how various groups use the tactic against multiple target sets is the aim of one's work.

For clarity's sake, I use the terms "organization," "group," and "entity" in identical ways, so as to avoid the trap that Pedahzur and Martin (2017) note some scholars have fallen into in assuming either a hierarchical or horizontal command structure. Indeed, even when studying "lone wolf" actors, there are often varying degrees of connectivity to larger networks (Benedikter 2019). While either structural feature might be at play, given the regularity of network expansions and contractions (Moghadam 2017; Pape, Rivas, and Chinchilla 2021), I begin with the premise that there is no standardized command and control ordering across all organizational units. Even though aggregate behavior within a conflict zone points to the possibility that it does exist, which I observe and discuss where appropriate, the general consensus that has emerged among scholars is that the study of suicide bombing on a large scale is better served by analyzing group behavior (Martin 2021). How such a consensus has developed is the focus of the following section.

Epistemological Developments in the Study of Suicide Bombing

To better understand the topic of suicide bombing, an awareness of the ways in which it has been viewed, discussed, and theorized over the past several decades is a necessary starting point. Simultaneous to the rise of suicide bombing in the early 1980s, scholars grappled with its significance as an emerging tool of warfare (Pipes 1986; Taylor and Ryan 1988; Merari 1990, 1993). Then, a shift occurred during the 1990s, in which it became clear that it was being used not only against security (or political) targets, but increasingly against civilians. Consequently, attention was beginning to be paid to the decade's preeminent practitioners (Schweitzer 2000). This prompted additional academic study, which largely focused on individual choices to engage in the practice (Jurgensmeyer 2000; Stern 2004), cultural proclivities toward its use (Kushner 1996), interorganizational incentives to compete for market share (Bloom 2007), and organizationally derived strategic logic that was aimed at ejecting a foreign, religiously dissimilar, occupying force (Pape 2003, 2005; Pape and Feldman 2010).

By the early 2000s, and especially after the infamous and devastating attacks on the U.S. in 2001, the literature began to reflect a rejection of popular (usually journalistic) causal narratives that posited poverty, lack of education, or psychological disorders to be independent variables explaining the explosive behavior (Hassan 2001; Atran 2003; Hoffman 2003; Kreuger and Malečková 2003; Sageman 2004; LaFree and Bersani 2014). Clearly, hundreds of millions of people around the globe experience extreme poverty and fail to become violent (Crenshaw 1981: 383 – 384; Dershowitz 2002: 2; Cramer 2006: 87 – 134; Sabri and Schulze 2021), much less suicidally homicidal. Indeed, there is some evidence of a positive correlation, at least in some cases (Berrebi 2007; Piazza 2008; for a more recent Sri Lankan example see Benedikter 2019: 323), between suicide bombing and

economic, educational, or psychological (Atran 2003: 1535) wellness. What might be described as outrageous violent behavior tended to, and continues to, focus academics' efforts on a variety of exploratory pathways aimed at better understanding its nature and purpose.

By the mid-2000s, some scholars explored the morality of suicide bombing in the context of other types of violence conducted by other entities (Asad 2007; 2010), while others such as Kalyvas and Sánchez-Cuenca (2005: 232) hastily predicted that "suicide terrorism" would have faded into memory as a "temporary aberration." However, their prediction proved premature in that the number of suicide bombings increased by a factor of 3.6 (CPOST's SAD dataset), or 5.4 (START's GTD dataset) over the following decade; and it has far exceeded that by the end of the 2010s. This is especially true for targets that were not only civilian, but security, political, and diplomatic.

Even though there is an extrajudicial quality that defines much violent insurgent activity, revising the status quo[6] seems to be a logical aim. It does not *require* the targeting of civilians, which seem to be the headline-grabbing incidents that tend to raise general awareness of suicide bombing. Attacking civilians and non-civilians is a choice. It is always a choice and never solely an outcome of circumstances beyond the control of those who see fit to use suicide bombing against either target category. Despite common references to being "impelled" by the "tremendous pressure of conditions" foisted upon them to behave violently (Goldman 1978 [1910]: 196), as Ward (2018: 98) notes with regard to justifications for suicide bombing rooted in humiliation and trauma, "many more individuals experience such feelings than engage in acts of violence."

[6] Here, I draw indirectly upon Glaser's (2010) state-centric distinction between status quo and revisionist powers.

I take what some might view as an analytical approach to the topic and am not interested in judging any particular party for choosing to use suicide bombing, whether against civilians or non-civilians. Nor do I seek to justify or denounce what many would view as horrific acts. Instead, I explore a certain set of dynamics that speak to NSAGs' targeting prerogatives and the meaning these might have for the entities that conduct suicide bombings. That effort requires a review of the debate that was produced by Pape's bold thesis on suicide bombing as a strategic choice.

Pape and Similar Arguments: Occupation and/or Intervention Causes Suicide Bombing

As noted, a sincere study of the topic began to emerge with what one might call the "Pape thesis," in which Pape asserts that there is a strong correlation between suicide bombing (as a dependent variable) and independent variables such as external intervention by a religiously distinct, democratic, occupying force (2003, 2005; Pape and Feldman 2010). Scholars began to notice that, despite the potential usefulness of characterizing suicide bombing as a strategic logic, Pape's theoretical propositions had run into empirical difficulties (Hoveyda 2005; Atran 2006; Moghadam 2006a; 2009; Ashworth et al. 2008; Chenoweth and Lawrence 2010: 5; Buckley 2018), which were, as Moghadam (2006a: 724), Crenshaw (2007: 134) and Singh (2019: 429) note, "overtaken by events."[7] Despite the shortcomings that scholars had identified with Pape's work, one simply cannot discuss the topic of suicide bombing without at least acknowledging his contribution; faults and all.

One of the primary reasons so many scholars have shed doubt on Pape's independent variables hinges mainly on an overreliance on the requirement of occupation itself. For instance, the

[7] OBE (Overtaken By Events) is a term often used in the military and intelligence communities (L. Johnson, 2017: 71).

practice has occurred where no occupation exists; for example, Bangladesh, Pakistan, Turkey, Cameroon, and Sri Lanka to name a few states. In the last example, there *was* a religious difference between adversaries, but it wasn't the focal point of either party to suggest that this was *the* casus belli for their violent engagement.[8] Rather, it was ethnic (pro-Tamil) and ideological (pro-Marxist). A cursory glance at the more recent instances of suicide bombing patently reveals that the occupation variable in Iraq (at least since 2011), Syria, Yemen and Lebanon would retain little, if any, causal weight.[9] Indeed, my findings reveal that there is little evidence that occupation or intervention are correlated with a rise in suicide bombing attacks against either civilians or non-civilians.

Another variable to consider in Pape's work is the religious differences between parties to a conflict. One would have to explain the absence of suicide bombing from the repertoire of violence in such groups as the IRA; an exercise that Kalyvas and Sánchez-Cuenca (2005) attempt. Another approach would be to relax the definition by expanding it to encompass sectarian distinctions, but that exercise would not account for the many Sunni-on-Sunni attacks (which I discuss in the empirical chapters). Perhaps a consideration of factions (e.g., Salafi-jihadists aligned with al-Qa'ida or IS, or Alawites and Shi'a versus Sunnis) would lend more support to the "religious" dissimilarity variable, but that would undermine the original meaning that Pape ascribed to it.

[8] Organizations such as the LTTE and PKK might be interesting cases, due to their cult-like structure around the leader. Schalk (2017) discusses the LTTE as a group that had consisted of various religious compositions, but which also behaved as a cult. Many who act violently on the basis of an occupation narrative will likely say they *feel* occupied. However, saying that one feels a certain way does not make the occupation exist in any place but their own minds. They may genuinely feel that way, of course, but this feeling might also be a form of misdirected aggression that is more akin to ad hoc or post hoc violence justification narratives.

[9] Of course, as Horowitz (2015: 76) notes, in his discussion of Ashworth et al.'s (2008) criticism that Pape inappropriately selected on the dependent variable (suicide bombing), "By only looking at those groups that use suicide bombing, initial research on the relationship between occupation and suicide bombing failed to account for the possibility that occupation was not a driver of suicide bombing, per se, but of all types of violent resistance to occupation."

Another of Pape's variables runs into trouble when one party must be considered a democracy. At least in Syria, Iraq and Yemen one would have to re-define what democracy is, or otherwise attach adjectives (Collier & Levitsky 1997) in order to qualify regime types, as approximating some form of it. A quick scan of the Polity IV scores for each of those countries casts serious doubt on the "democracy" variable. Indeed, Wade and Reiter (2007) contemplate the causal role that democracy might have played in engendering an environment in which the practice could thrive, yet find it to be lacking causal weight. Piazza (2008) also finds democracies are not more prone to this type of attack, even if the individual practitioners hail from less democratic polities. Even if there appeared to be a correlation between democracy and suicide bombing at one point in time, the evidence that there is something akin to a causal relationship appears to cut in the other direction over the past several years.

Nonetheless, on the topic of NSAGs acting against democracies, Stanton (2013) argues that insurgents, "rebel groups"[10] as she aptly terms them, are more prone to use "terrorism" when their opponents are democratic states and that the form of terrorism is predicated on the need for civilian support. The main assumption on which her logic is constructed is that violence against civilians is "… intended to alter the behavior of a third-party actor: the government," but that both the government and rebel groups "… also compete for support from domestic and international constituencies" (1011). A central argument is therefore that "rebel groups consider the regime type

[10] I recognize that many use the term "rebels" to describe what I'm calling "insurgents." Where they have used such terminology, I do so for the sake of conveying their authentic words in lieu of my own preference.

of their government opponent when deciding which form of violence will best aid them in achieving their political objectives" (1012).[11]

I'm in agreement with Stanton that "Disaggregating civilian targeting and analyzing forms of violence against civilians permits closer examination of the causes of violence, as different forms of violence are associated with different strategic objectives" (1009). Stanton's disaggregation *within* the civilian target set might facilitate her data analysis, but she doesn't measure them in *comparison* with the overall attacks against non-civilian targets, or what I call the "security" target set. What she was likely seeing was that the sheer volume of attacks in certain theaters was huge, across target sets, and therefore the "high-casualty" attacks she was observing were simply reflective of the magnitude of the rebel organization's capacity to cause harm to whichever target set it chose to attack.

It is therefore insufficient to claim that the targeting choices made by NSAGs hinges on the degree to which the incumbent's regime type is more or less democratic (Lyall 2010). It remains quite possible that the types of threats insurgents face may be driving some of the decisions they make regarding whether to attack civilian, security, political, competitor, or other target sets. For

[11] On 1014, she makes some arbitrary coding arrangements, which are cited here in full. "*Rebel Group Terrorism* is a dichotomous variable, measuring whether a rebel group used small-scale bombs, such as car bombs, suicide bombs, or improvised explosive devices (IEDs), to attack civilian targets; the measure does not include artillery shelling or bombing of towns or cities. If a rebel group bombed a civilian target once or twice and there is no evidence that this constituted a pattern of behavior, I do not code the group as using terrorism." The issue with that coding logic is that it will exclude a large number of attacks on civilians and discount when attacks on the target set didn't appear patterned. So, for a rebel group that sent mortars into a residential neighborhood on one or two, but not three or four, occasions, the data is dropped. Yet, this is precisely what many terrorism practitioners do. Although it is no fault of her own, her dataset ends at 2010 and her study therefore falls somewhat flat when one looks at any robust databases, such as the GTD (she uses UCDP-PRIO 1980 – 2010), from 2011 onward, which would reveal that the lion's share of terrorism was occurring in Iraq and Syria and neither of their governments would have been coded in Polity IV (her measure of regime type) as democratic.

instance, how groups fight is the key theme for Bueno de Mesquita's (2013) analysis of insurgents, or "rebels" as he also calls them. His analysis considers tactical choices through a prism of conventional (in this instance describing terrorism) versus irregular (in this instance describing guerrilla warfare) optionality. His main point is that successfully countering rebels will result in their moving away from terrorism (civilian-centric targeting), but toward more numerous guerrilla warfare (security-centric targeting) tactics. So, one might consider not the regime type that describes the incumbent (or intervenor), but the manner in which it responds to insurgent violence. In short, regime type seems less relevant than it was earlier believed to be.

Pape's Theory Inspires Inquiry; Even if its Generalizable Qualities Have Diminished

Pape's "strategic logic" theory was a necessary first step in that it stimulated further scholarly attention to the topic. Many academics continue to draw upon the Pape thesis as an inspiration for, and a baseline for comparison with, their own work. Some continue to make similar kinds of arguments that claim the impact of an external aggressor is tied to self-sacrificial killing. For instance, Santifort-Jordan and Sandler (2014) identify the "War on Terror," as an independent variable that has a causal impact on suicide bombing. However, during the time they were writing, and since then, such a variable has lost any meaningful definition, undermining any generalizable quality that might be derived from their conclusions. They analyzed 2,448 cases of "suicide terrorism" between 1998 and 2010, but even as they were writing, the number of attacks had already increased by 1,623 (CPOST's SAD data) or 1,976 (START's GTD) attacks between 2010 and 2014 alone. Such an increase represents (more than) a doubling of the universe of cases (66% according to SAD, or 80% in the GTD data). The rapid proliferation of suicide bombing is problematic for many scholars, as it alters the basic measurement of the phenomenon and strains academic

consensus. Santifort-Jordan and Sandler are not alone, as I suspect my own analysis and conclusions will be overtaken by events ten or twenty years hence.

Building off Pape and Santifort-Jordan and Sandler, Choi and Piazza (2017) make a similar assertion, but claim that suicide attacks are more common when a foreign military intervenes (as distinct from when it occupies) on behalf of a regime; especially with a large ground force.[12] They claim that the resultant hardening of targets leads insurgents to *turn to* suicide attacks. What seems to become apparent when studying the data is that the hardening of targets likely presents an additional obstacle for insurgents to overcome. However, the empirical record reveals that civilian-centric attacks are rather common and sometimes represent a preponderant "soft target" class within the course of a given conflict (a later point regarding al-Shabaab's attacks in Somalia calls into question the distinction between hard and soft targets in that particular combat space).

The primary weakness of Choi and Piazza's study is that the temporal limit of their cases was 2005. This hinders their ability to consider the tremendous increase in suicide bombing over the twelve years preceding its publication in 2017. Suicide bombing in places such as Syria, Iraq, Nigeria and Yemen prior to any foreign state's combat presence (whether pro- or anti-regime) has become quite common and Russian military incursions in Georgia (2008) and Ukraine (2014 & 2022) did not feature suicide bombing as a key attack mode.[13] Therefore, the extent of their finding tends to lack some staying power.

[12] Lyall and Wilson (2009) make a similar causal claim with respect to insurgent resilience and counterinsurgent failure.
[13] There are other issues that undermine their claim. For instance, they note on 293 their dependent variable includes "attacks against all types of targets, including civilian ones," which simply can't be reconciled with the fact that less than half (46%) of all suicide attacks have been against military and police targets (GTD 2016 dataset), as opposed to the

There is a common theme running through the above scholars' work. They each seem to have pointed in the direction of some strategizing on the part of suicide bombing organizations. Since suicide bombings are often organizationally driven, there are attack patterns in targeting prioritization that can reveal changes in insurgents' thought processes (Gabbay and Thirkill-Mackelprang 2010). Insurgents must commonly deal with a lop-sided balance of power, whether due to invasion, intervention, or the state's inherent force advantages. Take for instance Choi and Piazza's "hardness" of targets point. Hardness is indicative of impenetrability, or the ability to withstand a significant blow to one's defenses.[14] Yet, the hardness feature also implies the capacity of the target to fire back, which means they can present the greatest threats to an attacker's survival. Consequently, harder targets represent greater obstacles to the attacker's ability to alter the power balance and attacking these targets seems to be more synonymous with acts of power balancing. In consideration of this line of logic, I later develop a Physical Challenger Threat (PCT) variable, which scores the threat posed by the target sets against which suicide bombings are aimed.

Post-Pape - NSAGs & Tactical Decisions - An Epistemological Sea Change

Moving beyond Pape's "strategic logic" theory, contemporary scholarly efforts have become more tactically and operationally oriented, as the contours of different conflicts have changed over the past decade and a half or so. Still, there remains some discord regarding the independent variables that might be causally tied to the adoption of suicide bombing. Since the earlier universe of

96.7% they cite on 277 (through 2005). This error can be accounted for by understanding that the number of cases, according to the source they cite (GTD) was about 738 between 1981 and 2005. Yet even looking at the exact same data reveals that only 42% of attacks were against military and police targets (what I term the "security" target set). Perhaps this is simply an oversight, but since hardened targets are key to their argument, they should be able to consider soft targets in juxtaposition, which they don't.

[14] There are some differences in how "hardness" and "softness" are defined among scholars. For instance, Berman & Laitin (2005:10) classify "hard" and "soft" targets in a very different way than I do. They seem to mean "hardness" as synonymous with reach capacity and "softness" as synonymous with "coreligionists."

cases remained somewhat limited, the incipient causal arguments being advanced eventually exposed the shaky ground on which many assumptions were built. The assumptions appeared to have suffered from scholars cognitively anchoring their focus on terrorism as the typological setting most associated with suicide bombing. This is understandable, given alternating conceptions of the activity as being either terrorism (e.g., in Europe or Israel), guerrilla warfare (e.g, in Lebanon), or some combination of the two (e.g.,Iraq, or Syria). Yet, as the practice has evolved temporally and spatially, inherent weaknesses in the supposed causal chain have retrospectively become clearer. As suicide bombings have increasingly been observed in insurgencies, scholars have responded by considering the tactical and operational features that attend its rise in use.

More recent scholarship has focused on suicide bombing as it relates to particular conflicts (Rome 2013; Aran 2018; Warner, Chapin and Matfess 2019), others on more narrowly focused conflict zones (Wilkey 2014; Ibrahim Shire and Hersi 2019; Ibrahim Shire 2020; Warner, Chapin, and Sorenson 2021), whether in multiple theaters (Buckley 2018), or as a broad topic for which to seek more useful epistemological lessons (Singh 2019; Mroszczyk 2019). What these works have in common is that evidence has emerged to support the claim that suicide bombing is a tactical choice that is best understood as being be wielded in the service of intermediate "process" goals, rather than a strategy that seeks an end-state victory, or "outcome" goal (Mroszczyk 2018). In this sense, considering the battlefield gains the parties seek to achieve are a better starting point than, say, theorizing that a particular tactic is the only one on which all hopes are pinned in determining the outcome of a conflict. What one sometimes finds when studying suicide bombing, which was

observable during the Pape-dominated era, is that a strategy that is heavily laden *with* a particular mode of violence may tend to appear as a strategy *of* that type of violence.[15]

Even though there is no working theory of suicide bombing that seems to garner broad consensus (Ward 2018), and theories that seem fairly potent are often inapplicable when carried to regions beyond their initial development (Benedikter 2019: 331), building toward one is an enterprise for which a rigorous process must be undertaken. I take the approach that it matters less if suicide bombing or terrorism *actually* work, the core of the "efficacy" debates, if one simply measures an organization's *stated* long-range goals against their use of suicide bombing, or in light of a claim that they engage in "terrorism" to further those ends. So much attention has been placed on gauging the efficacy of suicide bombing and/or terrorism, that the result has sometimes tended toward academic inertia.[16] NSAGs do continue to practice both violent behaviors and that fact alone is worth closer inspection.

Adaptation Through Suicide Bombing: Navigating the "How" Question

Horowitz, Perkoski and Potter (2018) find that innovative techniques, such as suicide bombing, enhance adaptation in response to the actions of states and competitors at the operational level. Indeed, combined arms ("tactical diversification" in their parlance) are precisely the ingredients

[15] Shultz (1978) grappled with this in his attempt to clarify a typology of political terrorism in his discussion of strategy (11 – 12). Something that perhaps no scholar has ever endeavored to remark about Pape is that the success he enjoyed with his earlier work on strategic bombing (1996) may have influenced the lens through which he approached a wholly different phenomenon.

[16] On the leading arguments about the efficacy of terrorism and strategy of suicide bombing, Krause (2018a: 34) says the following: "Robert Pape and Max Abrahms are two of the most cited authors on the effectiveness of terrorism, but their prominent studies also provide an excellent example of 'the debate that wasn't' that is symbolic of the larger subfield" (2018a: 34). He also notes a similar "'debate that wasn't' also exists with studies of the effectiveness of insurgency…" (2018a: 36). This single article, which is in large part a rebuke of misguided scholarship, is an excellent starting point for emerging scholars to avoid committing common errors. Even though such mistakes begin and end with academics themselves, the real tragedy is that policymakers who subscribe to prevailing wisdom may learn the wrong lessons when popular, yet faulty, ideas gain traction.

that contribute to NSAGs' efforts to survive.[17] It would be a mistake, however, to assume that the logic is entirely bound by states' or competitors' actions. For instance, Acosta (2016), who has developed SAND (Suicide Attack Network Dataset), finds that organizations that use suicide bombing are not only adapting to the violent marketplace in which they operate, but are enhancing their relevance and chances of survival versus those who do not use the tactic. Along with reacting to environmental changes (adaptation), one must consider that insurgents often seek to proactively shape the conflict in some fashion, and many seem to do so through the use of suicide bombing, among other TTPs (Tactics, Techniques, and Procedures). While organizational longevity and survival through tactical adaptation might be foremost in the minds of groups that use suicide bombing, there are other instrumental factors to consider.

In analyzing modes of suicide bombing, Ibrahim Shire and Hersi (2019) look at al-Shabaab's use of the tactic, with a specific emphasis on distinguishing between "simple" (one-off) and "complex" (combined arms) attacks. One of their interesting findings is that after the group experienced a number of failures in using BBIEDs,[18] during both "simple" and "complex" attacks, they adapted by using more SVBIEDs (12 – 13). This change in tactical delivery systems also coincided with the commencement of the entity's official linkage to AQ. Interestingly, with respect to complex suicide bombing attacks, they find that the targets against which they tend to be deployed are domestic in nature, not foreign intervening or occupying forces, contra-AQ's instructions (and Pape's predictions).

[17] I would add that the nature of an unpredictable threat, which suicide bombing events naturally are, also inhibits state efforts to balance against it.
[18] They use the term "PBIED" (Person-Borne Improvised Explosive Device), which I converted for convenience and consistency with my terminological preference for "BBIED."

Ibrahim Shire and Hersi's findings lead me to two inferences, at least in the case of al-Shabaab. First, they adapt to recent tactical suicide bombing failures by altering *how* they use suicide bombing, but they do not discontinue the practice itself; I later examine whether a rise in failed or foiled attacks correlate with a diminution in suicide bombings and find they do not. Secondly, although al-Shabaab seeks and accepts the support of AQ, they are more interested in winning battles against the incumbent forces than with pleasing a globally-focused alliance (senior) partner. In short, al-Shabaab does seem to factor its own fate into its calculus and does appear to want to win its war with suicide bombing being an integral device for doing so. This resonates with Acosta's (2016) argument about suicide bombing being an instrument of survival through adaptation, but it is also indicative of a desire to use it in a more efficacious way.

In a separate study on the use of suicide bombing by al-Shabaab in Somalia, Ibrahim Shire (2020) divides **detonation profiles** between **single and multiple** (including simultaneous, sequential-wave, and what is discussed shortly as being akin to "non-proximate"), across three time periods: 1.) prior to a decapitation strike on the organization's leader, 2.) following the decapitation strike, and 3.) following a massive suicide bombing against civilians he terms a "targeting error." He finds that following the loss of territory that characterized the first period, an increase in both single (concentrated against government targets) and multiple (concentrated against civilian targets) bombings were observed. During the second period, suicide bombings increased significantly, with single suicide bombings being most prevalent and multiple suicide bombings being less so. The former was mainly aimed at civilians and the latter at government entities. During the final period, both single and multiple suicide bombings diminished, but a key difference was that targeting for

both had concentrated on civilian establishments (hotels) that were used by either government or foreign personnel.

An interesting, nuanced, observation emerges from Ibrahim Shire's study in that the hotels being attacked in Somalia are more like "hard targets" than they are "soft targets," given the defensive structures they necessarily have in place (14). This finding suggests that target "hardness" can be conceptually malleable when applied across battlespaces. It also suggests that a rise in combined arms attacks may coincide with actions taken by the state (leadership decapitation) or actions taken by the NSAG itself (mass casualty civilian bombings). These features of suicide bombing demonstrate how it can be used within a specific battlespace as a tool to seek an advantage under conditions that may not be present in other conflicts.

In looking at combined arms attacks, suicide bombings involving more than one party can take at least three forms. For example, Warner, Chapin and Matfess (2019) find that Boko Haram employed multiple ("linked") suicide bombers in an effort to both enhance their killing capacity and generate a greater degree of uncertainty and fear. They observe that although a single suicide bomber might be slightly more effective (generating higher casualties), when disaggregating three linked-bombing detonation types a different picture emerges. The **three detonation types** they identify are: 1.) **simultaneous** (more than one bomber exploding at the same time – least effective, with less team members, most commonly used; especially against hard targets); 2.) **sequential-wave** (one bomber exploding after the other – most lethal, with the least team members, but least commonly used); 3.) **non-proximate** (two or more bombers detonating in a similar municipality at different locations – less commonly used, striking mainly soft targets, using larger teams, but most effective).

Boko Haram, therefore, appears to make decisions about the attacking unit's size and the manner in which they are deployed, but equally as important they are target conscious in their selection process. According to Warner, Chapin and Matfess, Boko Haram reveals a preference for harnessing the power of simultaneous suicide bombers against security-centric targets. The gap I have identified in their work is that the detonation profiles do not factor in whether other means of attack are combined with either the "linked" suicide bombings or whether a single suicide bomber is integrated as part of a larger delivery package. There is a distinction to be made here, which I have resolved by including two different variables: "combined arms" and "number of bombers." I later discuss the major caveat that more than one bomber, which is common for Boko Haram to employ, has an impact on whether an incident is deemed to be one of "combined arms."

Studying suicide bombing from a tactical level sometimes yields unexpected discoveries. For example, Distler (2017) compares suicide bombings to vehicular bombings, both of which he terms "terrorism," irrespective of the targets against which they are deployed. As he notes, he "found limited support" for his hypotheses (198), which were tailored to the attack - and country-level of analysis.[19] He did, however, find that "suicide bombings were more likely to be used in complex attacks" (157), that when compared to BBIEDs (Body-Borne Improvised Explosive Devices), SVBIEDs (Suicide Vehicle-Borne Improvised Explosive Devices) were "44 percent more likely to target security entities," and that SVBIEDs were "71 percent as likely to be used in complex attacks" (177).[20] Each of these findings are helpful in terms of understanding *how* suicide bombing forms part

[19] His hypotheses (laid out on 69) are five-fold (each beginning with "Compared to all other tactics of terrorism, suicide bombings are …": 1.) "… less likely to be used against hard targets." 2.) "… more likely to be used as part of complex attacks" [what I identify as "combined arms"]. 3.) "… more likely to occur on religious holidays." 4.) "… more likely to occur on election days." 5.) "… more likely to occur in countries with greater religious and ethnic diversity."
[20] Distler uses the terms "NSV" (Non-Suicide Vehicular) where I use the term "BBIED" (Body-Borne Improvised Explosive Device) and "VS" (Vehicular Suicide) where I used the term "SVBIED" (Suicide Vehicle-Borne Improvised

of a "combined arms" package, as I alluded to earlier, and it is also the basis for my having constructed a variable I term "vehicular."

Distler also suggests, and my work reflects agreement, that the organizational-level of analysis is perhaps better suited to gaining insight into how either attack type is chosen and applied within various conflicts. Furthermore, his attempt to uncover the contours of suicide bombing and to evaluate them in comparison with other NSAGs' violent actions advances along a tactical analytical axis that lends support to this dissertation's consideration of attack types and the target sets against which they are directed.

The above epistemological progression has altered the field of study so that it has moved away from Pape-esque analyses that are constructed on the notion that suicide bombings result from a reaction to external stimuli. Consequently, the field has undergone an epistemic shift toward an analytical framework that disaggregates distinguishable tactical variables that have emerged over the course of more recent conflicts that feature suicide bombings. Before offering a theory, or what may amount to a proto-theory, on suicide bombing, some of the tactical options that NSAGs might choose are briefly highlighted below. These options pertain to NSAGs in general, but there are implications for those that engage in suicide bombing.

Explosive Device). I have not altered his words in the cited portions, but have sought to remain consistent in using my own acronyms. He also looks at an attack type called "NSV" (Non-Suicide Vehicular), which I term "VBIED" (Vehicle-Borne Improvised Explosive Device). Using my terminology, he notes on 179 that SVBIEDs are 72% more likely than VBIEDs to target "security targets" and BBIEDs are 27% more likely to do so than VBIEDs. His definition of "security targets" seems to include the target type "non-state militia," which I tend to treat as part of the "armed competitors" target set.

Organizational Characteristics and Tactical Choices

In a broad analysis of weapons selection, Koehler-Derrick and Milton (2019) look at why various "terrorist" entities choose from among **two primary options**: **firearms and explosives** (this choice represents the dependent variable).[21] They theorize that firearms should be more common among those organizations that are more risk-acceptant, given a need for proximity to their targets and the probability that they will be countered with force. They argue that the choice of using explosives would be more common to risk-avoidant groups, as the hazard this presents to personnel can be reduced. They test two primary **independent variables**: 1.) **strategic goals** – with three degrees of expansiveness (within-system, limited anti-system, and expansive anti-system) and 2.) **resource constraints** – using group age as a proxy. They hypothesize that more expansive goals and greater group age will result in a higher proclivity to use firearms over explosives. They find that group goals do not appear to be causally related to the binary weapons choice they constructed.

Koehler-Derrick and Milton also find that older groups tend to use firearms, but that an organizational age increase from 10 years to 20 years doesn't increase this probability by much. In short, it seems start-ups are less inclined to use firearms than they are to use explosives. This is not surprising, given that the paucity of available firearms coincides with an abundance of easily obtainable explosive materials (e.g., pressure cookers, fertilizer, gasoline, etc.). Although they consider groups that use suicide bombing, they do not consider it as a "distinct tactical choice" (927

[21] There are some flaws in their delineation of weapons choice. For instance, knifings, vehicular assaults, and indirect fire attacks, are part of the terrorist tool kit, but are not under consideration as they fail to be categorized as either "guns" or "bombs." There are some other matters that tend to cloud their analysis. For instance, they speak only of "terrorists" and of the risk factors associated with using firearms against government or military targets. Yet, using these same implements against civilians (through "terrorist" attacks) is significantly less risky. Launching mortars or home-made rockets is potentially even less risky. Another shortcoming that I have noted in others' work is that the data under consideration spanned the period 1998 – 2005, which was understandable for the specific dataset (BAAD) that prompted their initial consideration, but to write in 2019 inhibits their generalizability due to the major tactical developments that transpired in the next decade and a half.

– 928). This is unfortunate, because it subverts the logical premise of their argument, as a suicide bomber must normally engage at a distance at least as close as one who uses a firearm, in contrast to one who plants a static bomb of some sort and moves to safety.

Approaching matters from a slightly different angle, some scholars have highlighted features that may enable organizations to use suicide bombing, such as whether organizational capital (Horowitz 2010; 2014), or tactical necessity (Gilli and Gilli 2014a), derived from either organizational age or size (Gilli and Gilli 2014b) are causally related to the decision to adopt a disruptive low-tech/high-yield innovation. Considering the age or size of organizations that have splintered or merged, whose remnants may have forged new entities, generates a measurement problem as configurations of either may tend to change over the course of a conflict.

Relatedly, age might matter for reasons connected to an organization's capacity to learn lessons and adapt (Frost 2012), which could also be a function of the leadership's combat experience. Size might be supplemented by external aid that enhances the organization's qualitative advantages (e.g., financial, materiel, or battlefield alliance configurations, etc.). In any case, organizational capital is worthy of consideration, as a sustained capacity to engage in suicide bombings requires extensive knowledge, logistical, and personnel inputs. Despite these organizational characteristics, the most prolific practitioners of suicide bombing emerged *after* the period under which Horowitz's and Gilli and Gilli's observations and arguments were made.

Studying a phenomenon that is on the rise, doubling or tripling quantitatively over the course of a couple of years, makes many generalizations tentatively able to be overturned quickly.

This seems to have been the trajectory taken in the study of suicide bombing. Nonetheless, I have observed that as an organization, Islamic State (IS) has held the top position in terms of the quantity of suicide bombings, while it was growing in size and capital. This observation resonates with my finding that suicide bombing does not appear to be a choice that failing or desperate organizations make, but one that more clearly coincides with a rise in organizational strength and territorial gains.

Ideology and Tactical Choices

Some scholars discount or minimize ideology (e.g., Duyvesteyn 2004; Rosenau 2007; McCauley and Moskalenko 2011; Abrahms, Maynard and Thaler 2018).[22] This is especially so when they obscure the entwinement of ideology and political Islam. However, when other scholars do not do so, their work appears to produce more robust analyses (Hafez 2006; Jones 2008; Asal et al 2009, in part; Moghadam 2009; Hegghammer 2010; Braniff & Moghadam 2011; Bale 2013; Ganor 2015; Lahoud 2016; Bunzel 2017; Wood, G. 2017; Hassan 2018; Choi and Acosta 2018). This is *not* to say that Islam itself causes "terrorism" in general, or suicide bombing in particular, but the religious-ideological link[23] should not be glossed over, at least as an intervening variable. To do so would be intellectually dishonest, as the vast majority of organizations in the latest iteration of this violent behavior *themselves* claim they are guided by some form of Islamist aspirations, as has been noted for a couple of decades (Esposito 2002; B. Lewis 2003; 2004; Wright 2006).[24]

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[22] Asal et al 2009 (261 – 262) points to Duyvesteyn's oversight, attributed to page 450, yet it isn't clear that she is completely wedded to the notion that ideology can be fully ignored. Rather, she seems to be focused on other scholars' quest to declare a certain *newness* to the more recent strands of terrorism, by blurring the distinction between political, territorial and religious motivations. With respect to Rosenau (2007), even while analyzing subversion in insurgences, for which terrorists are surely relevant actors, he makes an effort to leave Islamists out of the equation. He addresses this intentional omission on pp. 8 – 9.

[23] Harari (2014: 229) makes a good case that religion and ideology are not all that different.

[24] Although there is a danger in considering the qualifying language organizations use to justify their violent acts, it is worth taking into account the lengths to which they go in order to express their legitimation. The danger is that one can cherry-pick the elements that seem plausible, while excluding those that seem unpalatable. For instance, if one is inclined to believe the Pape argument (discussed later) that people commit suicide bombing in response to external intruders, but

Religion has clearly been a "dominant force" behind suicide bombing trends (Hoffman 2017: 139) and Berman & Laitin (2005) correctly predicted the rise of radical religious insurgent use of suicide bombing. As Henne (2012: 52) notes, "Studies of suicide terrorism that ignore – or attempt to downplay the importance of religion in groups' actions will therefore be incomplete, and possibly misleading." It is an empirical fact, although it has not always been the case, that the vast majority of suicide bombings over the past decades have been carried out by organizations belonging to a peculiar Salafi jihadism sub-category. To ignore the recent trends would be not only dishonest, but an irresponsible disregard of facts that bear directly on the phenomenon under study. Therefore, I'm logically focused on entities that overwhelmingly (even if not exclusively) fall into this category.

It is therefore difficult to discuss suicide bombing in the absence of some acknowledgment that groups tending toward its use do appear to adhere to strong ideological or religious traditions (such as the PKK, LTTE, IS, etc.). For example, Choi and Acosta (2018) argue that *dominance* through suicide bombing is a feature of contemporary Sunni suicide bombing campaigns. They contend that Sunni Muslims who use suicide bombing are not so much tethering the practice to a set of process goals, as their Shi'a counterparts earlier did, but to extraordinarily difficult-to-attain

ignore cases where an invasion doesn't exist, the theory is violated but the attachment to it remains. Another example would be the idea that groups or individuals use terrorism because they are weak, which for those who are attached to an underdog/overdog dichotomous argument would be more easily convinced by a portion of the terrorists' justifying logic. That is, if one thinks they see a "freedom fighter" who is seeking to ameliorate a purported oppression, one might be inclined to see an honorable objective, where they probably should see an onerous pursuit. The opposite error, overestimating the Islamic logic, can occur if one discounts the overwhelming majority of faithful adherents who don't advocate violence, much less a practice of suicide bombing. Nonetheless, when the terrorist repeats certain themes, it is worth considering which audience he/she is addressing, or intending to address. When they regularly tap Islamic themes, its quite possible that they seek to engage those who are predisposed toward viewing matters through a similar prism.

outcome goals. They find that sectarian violence, as an independent variable (and not foreign occupation), predicts whether Sunni Muslims use suicide bombings. Choi and Acosta note that much of this behavior is geared toward eliminating civilians whom they deem to be apostates, rather than merely coercing non-believers to accede to their demands, with Afghanistan being an outlier.[25] They demonstrate that the civilian-centric focus of suicide bombers might be aimed at shaping a given conflict where sectarian divisions are more pronounced.

Choi and Acosta make some interesting points, some of which support my own research and one that seems to contradict a key theoretical component of it. For instance, we agree that dominance is a key theme, that foreign occupation is largely irrelevant and that attacking civilians is a means of shaping a conflict. On the surface, we seem to be in disagreement over their point that difficult-to-attain outcome goals are privileged over more intermediate, or process, goals. There is room, however, for some overlap between our conceptualization of the means-ends chain. That is, civilian targeting could represent an NSAG's desire to bolster its dominance or relevance, which would aid in presenting a fait accompli to those that might be inclined to call their survival and longevity into question. Simultaneously, process goals might be better served by attacking security targets that afford the NSAG the opportunity to increase its capital and territorial gains.

NSAGs that practice suicide bombing tend to be referred to as "extremists" who use "extreme" measures in a given conflict, but what the term means can be a bit confusing. Some

[25] They note (14) that, "while the Sunni Taliban and its allies have carried out numerous suicide attacks against Shi'a in the country, most suicide attacks target fellow Sunnis allied with the government or coalition forces. Perhaps the chief reason has been the Taliban's ability to seriously challenge Afghanistan's government forces. This capacity has likely offset the Taliban and other Sunni militants from turning inward to weaker 'apostate' Muslim civilians as is the case in other conflicts."

scholars, such as Walter (2017), argue that extremism pays in civil wars. Although her work was more theoretical than empirical, she is not alone in asserting that ideology (Drake 1998), especially that of Salafi jihadists (Kepel 2003; Khosrokhavar 2010), is of some use to insurgents. Walter argues that insurgents seeking to win, *choose* an ideology that is most proximate to the beliefs of the surrounding population they seek to control or conquer and that will deliver the end-state political objectives most closely associated with local preferences. Of course, it might be that a given ideology already exists among the populace and is at least more palatable in comparison with less preferrable alternatives that the entity then distinguishes more clearly.[26] In Walter's work, the "extreme" element under consideration is the puritanical absolutist aims espoused by the rebel group and not necessarily representative of their targeting preferences.

Walter asserts that when insurgents harness the power of their ideological extremism, they are able not only to resolve internal collective action problems, but they signal a multitude of audiences that they are viable, dominant and capable of winning. Other scholars seem to agree. For instance, Siroky et al (2022) find that "haram" (locations where certain behaviors are interpreted as being forbidden by Islam) targeting is a mechanism for overcoming collective action problems among mixed-ethnicity Salafists, while enhancing internal cohesion on the basis of the religion as a superordinate guiding force. This is supported by Braun and Genkin's (2014) finding that collectivist culture reduces the cost of suicide bombing.

[26] It is difficult to say whether an entity "chooses" an ideology, or whether its popularity had given rise to the group's existence. A substantial portion of the given population may have had ample exposure to an ideological tradition. Thus, they can be primed to consider its familiar contours.

Walter's analysis is not without its detractors, however.[27] For instance, Abrahms, Maynard & Thaler (2018) have issued their collective dissent, albeit (also) without much empirical support. Yet their criticism seems to have been leveled on grounds that go beyond the narrow civil war scope (in the case of Maynard & Thaler at least) that Walter intended, despite the validity of their evaluation.[28]

In my own analysis of suicide bombing, two observations seem to resonate with Walter's points. First, there seems to be a strong bond between ideology and the use of suicide bombing (either of which can be depicted as "extreme"). This is consistent with others' findings. For instance, Henne (2012) finds that the religious ideology of a group is positively correlated with the lethality of suicide bombings, while Ahmed (2018) finds that target selection varies, according to differences in groups' ideologies.

Secondly, the empirical record I have observed shows that dominance over others is a theme associated with its use in insurgencies. For instance, Krause (2013) observes that for national movements, a hegemonic insurgent group tends to achieve strategic success more than fragmented

[27] I'm not a detractor, but would like to express that she made some errors in this piece. For instance, on 35 she considered alternative explanations by attempting to debunk the notion that "Muslim citizens have become more radical since 2003." Yet, she cites a Pew Research Center poll from Lebanon that depicts the population as viewing the Islamic State in an overwhelmingly negative light. The sample set suffers from an obvious selection bias in that at least half of that country's population is not Sunni Muslim and was being attacked by the (Sunni Muslim) insurgents in their own country. The other main criticism I have is that she assumes insurgents simply choose from among ideologies, as though its usefulness as a tool was suddenly realized. She is overlooking the ideology's deep roots, along with the framing and priming that accompanies it. If an ideology resonates with the population, it should be obvious that its adherents have likely found it palatable prior to their entry into armed combat. My sentiments are formed from my own study of the issue and are most obviously supported by considering the Iraq battlespace specifically.

[28] Although other portions of this dissertation will cover the specific battlefields Walter and her detractors are analyzing, it seems Abrahams is trying to take down an argument that sometimes places him in a precarious position himself. For instance, when he castigates her, on 187, for citing Salafi jihadists' staying power, he does so by providing examples that included that "… Idlib is dominated by the Nusra-led Hay'at Tahrir al-Sham umbrella group…" This is a poor representation of contravening facts, as HTS is merely a re-branding of AQ in Syria, which still seeks very extremist ideological aims. Walter mentions this fact herself on 34. Many leading scholars in the field know this as well; e.g., McCants 2016, as well as many of the works by Aymenn Jawad al-Tamimi; accessible at http://www.aymennjawad.org/.

entities or united alliances do, because the process of domination facilitates the resolution of problems associated with credible coercion, signaling, and the pursuit of disparate objectives. Therefore, it can be said that adherence to an "extreme" ideological tradition serves very instrumental purposes that exceed the bounds of organizational survival and longevity.

Similar to Walter, using the CGS (The Cunningham, Gleditsch and Salehyan's Non-State Actor) dataset, Fortna (2015) concludes that "terrorism" is used to prolong civil wars, but does not necessarily usher in victory. Therefore, she sees it as a tactically successful option, which explains why many NSAGs choose to use it, despite its lack of strategic accomplishment in civil wars. It seems that civilian-centric targeting is a rationally calculated, even if deplorable, means of fighting on behalf of an insurgency's intermediate objectives. In this sense, attacking civilians is not a form of threat-response behavior, but organizational survival. It's more geared toward shaping a conflict than it is for adapting to threats.

Insurgents that use extreme tactics,[29] among which many might consider suicide bombing for instance, tend to alienate the population once a certain threshold is attained (Hafez 2017; Abrahms 2018; Ibrahim Shire 2020). However, where exactly that line exists is somewhat difficult to predict; even for the insurgents themselves (Thayer 1963). For instance, during the initial insurgency in Iraq (2003 – circa 2008), the tacit complicity of Iraqi civilians, and overt allegiance of Iraqi militias, shifted away from the AQI-led insurgency as a consequence of their misapplication of violence (Byman 2008; Kilcullen 2009) coupled with a deficient long-term strategy for governing

[29] Some other examples of what I mean by "extreme" would be large-scale explosions, that might generate mass casualties, or using weapons of mass destruction, or the wholesale execution of those who are alleged to be enemies or collaborators employed in their service. In short, by extreme I mean shocking to the conscience when considered alongside other forms of low-level violence such as using small arms fire, or using small explosives like pipe bombs.

(Serena 2014). Yet, despite this fact, insurgents have regularly used violence against civilians (Tinker 1969; Findley & Young 2012a; Schmid and Jongman 2008 [1984]: 13 – 18) and they continue to murder those whom they would rhetorically regard as their brethren. This remains true in recent times with regard to Salafi jihadists (Hafez 2017, 2019).[30] Although ideology might play an outsized role in the decision to use suicide bombing, there are other instrumental explanations that may better explain why NSAGs regularly repeat such suboptimal behavior.

To summarize some of the above civil war literature, one can see in a number of scholars' work that NSAGs may choose certain types of violence due to characteristics that are believed to be associated with either the incumbents or the insurgents themselves. For instance, regime type (Stanton 2013), actions by the regime toward insurgents (Bueno de Mesquita 2013), insurgents' efforts to extend their time horizons (Fortna 2015), or to advance their internally derived interests (Walter 2017) might be factors in determining why insurgents choose certain violent pathways and not others. In sum, a group's adherence to an "extreme" ideology and its use of "extreme" tactics might pay some dividends, particularly with regard to an NSAG's longevity concerns, by maintaining a dominant position in a given battlespace. Therefore, when looking at NSAGs' tactical decisions, particularly suicide bombing, the analyst is better positioned in thinking how the actions might be perceived by the group to enhance its survival versus considering certain tactics to be irrational, or counterproductive, in practice.

[30] This sort of behavior isn't limited to Salafi Jihadists, as Lewis (2012) cites Gunaratna (1993) in noting that Prabhakaran's LTTE "'…eliminated his fellow Tamil opponents more ruthlessly than his ethnic enemy.'" Also see Lilja and Hultman (2011), as well as Fjelde and Nilsson (2012). It's even possible that a group could engage in what Paul Staniland (2012) calls "fratricidal flipping," which is when an organization fights on behalf of the incumbent against other insurgents.

Battlespace Factors and Tactical Choices: Dominating People and Territory

One measure of survival is manifested in the degree to which an NSAG dominates both people and territory. The standard insight regarding territorial and population control is that insurgents must have both in order to succeed. One without the other is likely to yield little more than a failed experiment in the seizure of power. There are, of course, concepts that stretch beyond these two conventional considerations, such as extra-territorial aspirations and the conquest of minds versus bodies (e.g., see Mackinlay 2009).[31] Yet, a target-centric exploration of the battlespace tends to shed some light on why NSAGs attack different target sets.

Oftentimes, wielding control over a given population is a byproduct of having conquered a particular territory. For instance, control of the population within an NSAG's territorial dominion is an area for which Stewart (2018) argues that secessionist groups seek international legitimacy (the independent variable) and will therefore be more prone to offer inclusive services (the dependent variable) to areas under their territorial control (a key condition).[32] As useful as her study is, she doesn't consider how NSAGs behave toward civilians when they *don't* control territory (218). Even when they do control the population within a given region, there is no guarantee that the provision of services is sufficient or is not offset by maltreatment and the delivery of "justice" toward some class of constituents. It is also worth considering that insurgents who seek to secede may later become more ambitions as they consolidate their control over territory they have won through

[31] To summarize Mackinlay's work, in any insurgent endeavor, there is a tendency to focus on territory and/or a population, but either of the two can appear in non-traditional ways. Territory may exist in a physical space, or a virtual dimension and the people over whom insurgents seek to wield power may be found in either realm.
[32] Note that I earlier cited (Humphreys & Weinstein 2006) as an example of the mistreatment of civilians who are under insurgent control. This sort of 'shadow government' point has been widely discussed for the past half-century, if not more, as insurgents who are naturally competing with the state must demonstrate that they can act in a state-like manner. Indeed, it occupies much of the counterinsurgency (COIN) literature as a main focal point for COIN operations.

conflict. In this sense, a secessionist insurgency might be characterized as a less ambitious version of one that seeks to replace a regime entirely.

Whether an NSAG chooses civilian or security targets, it seems both insurgents and incumbents have different senses of what their own behavior against the other side will achieve (Carter 2016; Fjelde and Nilsson 2012). It is also an iterative process that might determine which actions are taken or forgone (Tao et al 2016; Aronson et al 2017), which should not be overlooked (Ash 2018). For instance, Findley & Young (2012a) conduct a small *n* (largely descriptive statistical) study and conclude that "terrorism" seems to occur more frequently during, rather than before or after, civil wars and that its use might be predicated on some proximate stimuli (2012b). They note (2012b: 494) that "We need better data on zones of government and rebel control…" and that "… mapping where groups operate combined with the acts they perpetrate will allow a better synthesis that avoids compartmentalizing actions and actors." On the one hand, they seem to suggest that "terrorism" is not confined to a peacetime milieu, contra Sagemen (2017). On the other hand, they intimate that awareness of NSAGs' immediate surroundings might offer a glimpse into their behavior.

Tao et al (2016) consider territorial control through a prism of combatants' quick reaction capabilities using yearly data from the UCDP's (Uppsala Conflict Data Program) GED (Georeferenced Event Dataset) covering 1989 – 2010. Although limited to the Liberian conflict, their work offers a pathway for battlespace analysis. Using a similar geographic approach for studying Boko Haram in Nigeria, Aronson et al (2017) explore when violence against civilians tends to be used. They theorize that insurgents would be more prone to attacking civilians (dependent variable) in areas that are not fully under their control (independent variable), which they call

contested or "areas of interest." They view "areas of interest" as being locations in which either incumbents or insurgents will attack more indiscriminately in an effort to wrest control from their opponents. Their results demonstrate that rebels tend to attack civilians more when the government wields control over an area for which they have an interest. Collectively, Tao et al (2016) and Aronson et al (2017) point in the direction of geography and whether it is controlled or contested as an indicator for NSAGs' targeting proclivities.[33]

Asal et al (2018) use the UCDP's Battle Deaths Dataset to look at the relationship between insurgent targeting of civilians, "terrorism," in civil wars (the dependent variable) and government action toward them (independent variables consisting of either coercion or conciliation). They hypothesize that an increase in government conciliation (carrots) should result in a decrease in rebel terrorism and that a government's coercive actions (sticks) would accompany a consequent rise in rebel terrorism. They further hypothesize that the "impact of state coercive actions on rebel groups' likelihood of targeting civilians is conditional on the strength of the rebel group" (8).

Asal and colleagues exclude several data points. Most importantly, they only look at civilian targeting ("terrorism") and do not measure it in comparison to what I call the "security" target set. Their results are somewhat supportive of their hypotheses, but what is notable is that they find a positive correlation between rebels who hold territory and their tendency to be "much more likely to use terrorism" in comparison with groups that do not (18). Moreover, they find that coercive state actions are positively correlated with a rise in rebel terrorism, but that it is conditional on the

[33] Walsh et al (2016) have described a mapping program that is aimed at capturing territorial control and contestation, with the intent to make it an open source, near real-time, venture.

organization's size. They therefore call into question the oft-cited notion (e.g., Crozier 1960: 159) that "terrorism" is a weapon of the weak.[34] The trope is a convenient excuse that those who are labeled "terrorists" themselves commonly employ in justifying their actions (Walzer 2004: 51 – 66).

The literature on terrorism has yielded some relevant insight in terms of thinking about why NSAGs do what they do. McCormick (2003) identifies 3 theoretical traditions regarding the study of "terrorist" behavior. First, he looks at strategic theories, which tend to highlight the instrumental need to overcome power disparities. He then discusses the organizational frame, which centers on the internal dynamics of the group, but which also accounts for inter-group competition based on violence as a currency. Lastly, he draws attention to the distorted, yet rigid, psychological characteristics that attend individual and group interpretations regarding their perceived environment. McCormick's attention then turns to a discussion of the organization's "operating profile," which consists of its "choice of targets, tactics, and timing" (496). Decisions in that space, speak to "terrorist" groups' ability to adapt to their strategic environment, which directly impacts the group's survival or demise.[35]

[34] Cross (1963) had long ago observed the following: "There is, however, one trend which seems to be a constant for all Communist insurrections. As the guerilla fighting proceeds and the rebel movement matures, there is increasing emphasis on terror and coercion as the primary means of guiding and controlling the population" (94). In short, there was at least an anecdotal claim, based on experience, that the use of terrorism by insurgents doesn't necessarily attend weakness. Other scholars have come to recognize the "weapon of the weak" fallacy; e.g., Polo 2020: 248; Abrahms and Mroszczyk 2021: 158.

[35] "The rational terrorist group with good situational awareness can identify and adapt to changes in its environment until its strategic space contracts to the point that it finally runs out of options. Anything that interferes with the group's capacity to operate rationally or distorts its cognitive processes is likely to shorten its life span. Groups thus hindered cannot effectively adapt to changes in their environments and will drive themselves out of business over time" (McCormick 2003: 299).

Ash (2018) blends the GTD (Global Terrorism Database) with the PRIO (Peace Research Institute in Oslo)/ACD (Armed Conflict Dataset) when considering geographic data as a means to study insurgent targeting practices, using a mechanism he calls "relative deprivation," which hinges on electricity provision as an indicator of civilian grievances against the government.[36] He limits his work to include only "terrorism" and no other attack method, so any consideration of the target type was excluded.[37] Nonetheless, Ash hypothesizes that the capital region, and areas that interact more with it, should receive disproportionately more terrorist attacks (the dependent variable) than elsewhere.

He finds "terrorist" attacks to be more common in places where there is an absence of insurgent/incumbent military engagement, which is the opposite of findings reported by Tao et al (2016) and Aronson et al (2017). However, since he does not measure terrorist targeting/attacks in comparison with what I term the "security" target set, or what he calls "insurgent" attacks, his finding explains little about NSAGs' allocation of resources as a means for identifying decision processes. Ash may simply be tapping proximity to a target-rich environment, which is itself noteworthy.

A sensible question to ask concerns the aims that violent actors have in mind and whether one can infer as much from analyzing the target(s) toward which their actions are directed. For instance, Fjelde and Nilsson (2012) look at territorial control (the independent variable) and find that

[36] In thinking about such a phenomenon, one only has to consider that North Korea is perhaps the darkest country on the planet on any given night, yet terrorist attacks are either nonexistent or very low.
[37] Unfortunately, he also excluded groups such as Hamas, the PLO and al-Shabaab from his study.

it is positively correlated with inter-rebel violence (the dependent variable).[38] A likely explanation for their finding, as they conclude, is the assertion of dominance within a given battlespace. This insight is worth considering in light of my later analysis of suicide bombings being carried out against similarly oriented (e.g., co-sectarian or co-religious) entities.

Territorial control seems to matter in determining what sorts of attacks might be unleashed upon which target types (Asal et al 2012; Stewart 2018), which can be viewed as a measure of dominance. Dominating others, whether civilians (terrorizing, creating and enforcing rules, or denying/allowing service provision), competitors (via cooptation or elimination), or security elements (reducing the disparity in the balance of forces) appears to be the preferred outcome for many insurgencies. Suicide bombing can serve this aim in different ways. As I discussed earlier, there is some evidence, at least in the case of al-Shabaab in Somalia, that suicide bombings of civilian spaces followed territorial losses (Ibrahim Shire 2020). It has become clear that the connection between territorial and population control has some relationship to the target types that NSAGs choose. There remains a significant amount of work to be done in this regard and the study of suicide bombing would benefit from future research on this topic. Nonetheless, there is another perspective that needs to be considered, since it has given rise to debates about whether certain types of NSAG behavior serve any durable purpose.

Tactical Analysis: Orienting Toward Process Goals Versus Outcome Goals

[38] This isn't the only independent variable for which a positive correlation obtained, but it does lend credence to the notion that territorial control matters for groups' force consolidation and concomitant elimination of challengers. Their work proffers similar insights such as those one might find in Lilja and Hultman (2011).

One approach to understanding the strategic logic employed by NSAGs is to consider their explicitly declared end-state (outcome goals) alongside their actions. Examples of such long-range goals are the extraction of clear concessions from, or forcing the capitulation of, an incumbent state. The question then becomes: did a group's behavior produce what it sought to achieve? There is a problem with orienting one's analytical style in this manner in that it limits the evaluative process to a binary choice between a strategic success or failure; the latter for which there is no shortage (Jenkins 1974, 2006; Crenshaw 1987; Schelling 1991; Abrahms 2006; 2010; 2012; 2013).

Another problem with such a macroanalytical perspective is that tactics and targets are not independently considered for their specific effects on the development of a given conflict over time. Therefore, I argue, that NSAG behavior might be better understood as being oriented toward process or intermediate-range objectives such as gaining international attention, demonstrating strength, announcing one's presence within a particular battlespace, or exhibiting dominance. Evaluating NSAGs' actions from this vantage point allows for a more robust analysis of a wider array of tactically-driven, constantly shifting, TTPs and the targets against which they are used. Moreover, considering process goals versus outcome goals is more practical in the sense that the end-state being sought by the entity is by definition a terminal event, but more instrumental concerns can sometimes be the ones an organization values the most, for at least a period of time (Harmon 2001). This is readily observable in tactical innovations such as hijacking, seajacking, or suicide bombing during times of both peace and war. In the next chapter, I lay out a target typology that speaks to this.

Concluding Remarks

The foregoing literature review was meant to describe an epistemic progression in the various fields of study that are attuned to NSAG behavior. The topic was explored by highlighting the developments I observed, such as the topical flow from the terrorism literature into the realm of insurgency literature, as well as its earlier treatment at an individual level of analysis and the turn toward better understanding it as an organizational phenomenon.

To summarize, the epistemological continuum briefly reflected a dominant strategic logic paradigm, but as its luster began to fade, efforts to better understand suicide bombing, which is often aided by studying NSAG behavior in general, have shifted in a more tactically oriented direction. As part of this effort, I have touched upon the importance of disaggregating target sets, the promising pathway that looks at territorial and population control, and the distinction between process (intermediate) goals and outcome goals. To further emphasize why process goals should be privileged in the study of suicide bombing, my work is heavily focused at the tactical and operational levels.

The empirical chapters I present demonstrate that ideologically/religiously motivated organizations excel in the practice of suicide bombing and they often use it against those whom one might perceive to be their natural allies. That is, they assert battlefield dominance in two ways: 1.) out-bombing – carrying out more, higher quality, attacks and 2.) bombing out – attacking their armed competitors (be they state actors or NSAGs) directly. It is with this principle in mind that part of my analysis considers whether suicide bombing is used in combination with other attack modes or with additional attackers, versus whether it is a one-off event. In the next chapter I introduce the contours of an organization-level theory that treats suicide bombing as a means for achieving more instrumental objectives, such as adapting to threats and shaping a given conflict.

Chapter 3: Theory and Methodology

Introduction to Theory: NSAGS Adapt to Threats and Shape the Combat Environment Through Suicide Bombing

The discussion in the previous chapter was mainly tailored to address the epistemological evolution in the study of suicide bombing and the more recent routes it has taken. However, as I noted, much of the analysis concerning suicide bombing tends to fall within a number of fields of interest (e.g., terrorism, insurgency/counterinsurgency, civil war, and military science). In order to advance toward an organizational-level theory of suicide bombing, I look at what has been said in the various academic traditions that have intersected with it. Suicide bombing isn't merely about the tactic itself, but about a range of impacts it can have on any particular conflict. My approach is to give preferential treatment to targeting, which I view as a means to detect behavioral anomalies that are in need of further explanation.

Target Selection and Some Possible Interpretations Associated with Its Use

Traditionally, few scholars have disaggregated suicide bombing from other forms of attack and considered each attack type against various target sets, but that has been changing more recently. Stanton (2013) and Fortna (2015) have come close, but they look at "terrorism" in civil war, without distinguishing suicide bombing as a separate form of attack. Horowitz (2010, 2014) and Gilli and Gilli (2014a, 2014b) look at "suicide terrorism" in combat, but don't distinguish between target types. My work attempts to bring together some of the insights I have gleaned from their studies, but with more recent data and a different methodological approach.

In looking at insurgent targeting, we can enhance our understanding by paying attention to signals and indices. Jervis (1989:18 – 19) identifies the former as deliberately delivered (even if ambiguous) messages, while the latter are interpreted by observing behavioral patterns inherent in another's actions. By observing how and what insurgents are doing, which can be instructive guides to revealed preferences, the observer is better positioned to discern why they use suicide bombing in certain ways. Analyzing patterns of attack and decisions about targeting allows for an estimation of suicide bombing's valuation by insurgents who use it.

While analyzing insurgent targeting priorities may prove useful, it is even more so if it is accompanied by an examination of certain changes in that behavior that speak to the entities' strategic assessments. Within the framework of signals and indices, there is analytical space to consider two separate decision-making pathways. First, NSAGs may intentionally be signaling their foes, friends, the media, actual or potential constituents, with a message they desire to send (despite how it might be [mis]interpreted). Secondly, whether or not they are aware, analyzing changes in behavioral trends over time may generate directional markers that reveal shifts in their strategic calculus. Gaining additional insight into these patterns holds some promise for furthering our knowledge about why violent actors behave in certain ways (and not others).

Below, I propose a simple typology, which I use as a guideline for interpreting the targeting choices ("target type") that are made by suicide bombers, as well as the typical behavioral classification that attends them. It is largely based on the possible motives the groups have in mind, whether they are mindfully signaling or unintentionally broadcasting, their intentions. In constructing a theory, or at least a proto-theory, of targeting, I draw upon literature that often

intersects with suicide bombing, but which is more broadly tied to the literature concerning how non-state actors wield violence.[1]

Table 2: Target Typology

Target Type	**Typical Classification**	**Possible Behavioral Interpretations**
Civilian	Terrorism	Scare/Punish/Divide/Garner Attention/Dominate
Political	Mainly Terrorism	Signal Presence and/or Ability to Impose Costs
Competitor	Mainly Guerrilla	Eliminate or Reduce Opponents/Dominate
Security	Guerrilla	Demonstrate Success/Amplify Prowess/Dominate

The Strategic Implications of Tactical Shifts

Examples of target variation can be seen in various conflicts. In Africa, it has been observed that most NSAGs vary their target selection over time, which can be a function of factors related to local support, in-group/out-group differentiation, inter-group rivalry & prospective power shifts, and government actions (Boukhars 2020). In Afghanistan, I found that the Taliban's pattern of use was distinguishable from that of both the Khorasan Chapter of the Islamic State and the Haqqani Network. Even within-group changes were observable for each entity over time. These alternating patterns make it clear that they are likely not due to random chance, but to a conscious effort to match tactics to a strategy.

Strategic assessments are not merely the province of conventional forces, as is normally the object of many scholars' analysis, but of any organized (including irregular) forces. People (Taylor

[1] Notably, "dominate" is a present in three out of the four possible behavioral interpretations I proffer; a theme I will return to in the conclusion chapter.

1983), terrorist groups (Libicki, Chalk & Sisson 2007; Horowitz & Potter 2012) and states (Walt 1985) seem to balance against threats in unique ways. So too do organized insurgents. For instance, when an insurgent organization begins to act in a more conventional manner, it is likely that "… the insurgents have calculated that the balance of forces has shifted in their favor to the point where they can deploy larger and more heavily equipped units against government forces in sustained battles…" (O'Neill 2005: 163). That is, tactical changes can reflect an entity's perception of its position in comparison with that of its opponent(s).

A threat-centric mindset also attends a state's decision calculus. For example, using TWEED (Terrorism in Western Europe Event Data), Carter (2016) considers both "terrorism" and "guerrilla warfare" in Western Europe over a 54-year period. He notes that, given the data he considers, "… almost a third of groups use a mix of tactics, analyzing a choice between terrorist and guerrilla tactics for groups is merited" (168).[2] He demonstrates that there is a distinct outcome that could be expected when non-state actors apply either violent technique. Since it matters how they employ violence, the implication of a shift in tactics is an essential element to consider when evaluating the battlespace in which they are engaged.

[2] What we have in common is how we define the terms "terrorism" and "guerrilla warfare" (see my personal expression of a semantic bias), but what we don't is related to scope conditions. The only (minor) criticism I have of Carter's work is that his binary target coding scheme (on 152) calls for the consideration of security forces (military or police) on the one hand, whereas all others are deemed civilian. This might make sense within a domestic European context, where competitor groups may not have existed nor been attacked. However, it doesn't necessarily work for my analysis of civil wars in which an inherent tension between combatant groups accompanies battlefield competition for relevance and dominance. It also seems that attacks on diplomats or local politicians would automatically be designated civilian targets, which might work for his given parameters, but again may not be as useful for analyzing high-intensity insurgencies.

The overarching strategy Carter tests is "provocation," which describes whether or not a government will be *provoked* into a violent reaction (overreact, as some would say). He finds that governments tend to respond more forcefully to guerrilla attacks (against security targets), than they do to terrorist attacks (against non-security targets). This cuts against some of the arguments that advance the idea that terrorism is used as a means to generate government repression, which is believed by some to cause a fissure between the government and the people over which its sovereignty is exercised. What further strengthens Carter's argument is his finding (on 163) that when the attacking group is not known, governments tend to retaliate the least. States, therefore, do not simply lash out and attack civilians at random. They're more prone to identify and attack the target that most threatens their own security.

Since a threat-conscious decision dynamic seems applicable to any given party in a violent dispute, NSAGs' approach to fighting can therefore reveal their perception of the balance of forces, or threats, as they adapt to or seek to influence their battlespace in ways that increase their own advantages at their opponents' expense. Although NSAGs may not necessarily adapt to their conflict environment quickly, nor well, it is reasonable to expect that they will make some effort to do so. Otherwise, we might either assume they are aimless and not mindful of an end-state, or are still engaged in the process of forming a more coherent strategy.

Organizational Adaptation in Response to Threats

Organizational adaptation in general is not a straight-line process (Cangelosi & Dill 1965), but a dynamic one that draws from internal and external cues (Herbiniak & Joyce 1985). It also centers on finding an optimal balance between strategy and the structure of the organization's

environment (Jennings & Seaman 1994; Krell 2000), based on perceptions of success and failure (Lant & Montgomery 1987). Yet, how any given organization defines success or failure is likely not identical to how any other entity might do so. Therefore, NSAGs must be considered within their operational environment, which tends to change when it takes on a transnational profile (e.g., entities fighting under the banner of IS or AQ do not face identical threats in Syria, Iraq, Yemen, Nigeria, or Afghanistan).

The very notion that one should unpack *how* insurgents fight is sometimes overlooked by scholars who seek to divine *why* they do. Fortunately, there is a burgeoning literature that is geared toward studying tactical (Shultz and Dew 2006; Bueno de Mesquita 2013; Horowitz, Perkoski & Potter 2018) and targeting (Asal et al 2012; Pischedda 2018; Schwab 2021) considerations. Similar attention with regard to "terrorists" has also been growing (Libicki, Chalk & Sisson 2007; Asal et al 2009; Krause 2018a; Ramirez & Robbins 2018; Koehler-Derrick and Milton 2019). Given that insurgent organizations' actions might betray their publicly declared narratives, I have decided to look at *how* their use of force might be a more meaningful approach to understanding what drives the suicide bombing phenomenon. In short, "how" questions serve as a mechanism for answering "why" questions.

Targeting Armed Competitors: State (Security) and Other NSAGs

Although many studies of suicide bombing had earlier left a gap in our current understanding of its use, due in large part to inaccurate, incomplete, discounted, or unavailable data, there have been a number of efforts to disaggregate target types as a way to enhance insights. Seifert & McCauley (2014) disaggregate suicide bombing targets, with an eye toward better understanding insurgents' changing priorities over time, which they find was dictated by *threat perceptions*. Gauging threats when making use-of-force decisions is a rational pathway toward reducing or eliminating

them and selecting the targets that are believed to accomplish that task is a logical means for doing so.

In looking at domestic terrorism, Nemeth (2014) finds that competition among terrorist groups drives down violent behavior, however, he also finds that nationalist and religious groups respond to competition with more violence. Each of the cases I review feature both nationalist and religious entities. Often they are both, suggesting that threat perceptions regarding armed competitors may explain an aspect of NSAGs' decisions to attack them.

NSAGs naturally tend to begin with what is commonly perceived as a disadvantage in the initial distribution of force and resources, or what is typically referred to as asymmetry.[3] However, they're often better able to circumvent and even overcome this disparity in ways that many practitioners (Tse-Tung 2000 [1961]; Taber 2002) and scholars (F. Hoffman 2006; D. Johnson 2009; Fortna 2015) consider to be an adaptive advantage, which can produce insurgent victory (Mack 1975, Arreguin-Toft 2001, 2005; Record 2007).

Attacking state forces and violent competitor organizations seem to be battlefield adaptations that serve a number of purposes, such as improving one's own ability to project force, or signaling one's strength and an opponent's weakness. It might therefore be viewed as a means of both balancing *and* signaling, or simply as a means for *signaling the balance of power*. For instance, in Syria, JN appears to have preferred to use negotiation, in lieu of violence, as a means to procure victory with other armed insurgent groups, when faced with the constraints presented by the main

[3] Sullivan (2007: 502) states, "Asymmetric wars are armed conflicts in which one actor has the destructive capacity to threaten the physical survival of the other actor but the reverse is not true because of a disparity in military capabilities that greatly favors one actor over the other." She is describing asymmetric *wars*, but embedded in her description is the notion of a power disparity between combatant entities, which is how I define asymmetry in general.

enemy (Syrian state) forces. However, when such constraints were paused, the group tended toward the use of violence in dealing with rivals; despite their ideological proximity to the group and the degree of power (a)symmetry (Schwab 2021). I also find that IS demonstrated a propensity to eradicate or assimilate ideologically similar rivals, which I interpret as one of the group's defining features: domination above all else.

Territorial Control as a Manifestation of Dominance

A substantial effort has been expended by scholars in trying to discern whether territorial control dictates NSAGs' targeting preferences. After all, territorial control is a physical manifestation of dominance. While this approach holds great promise and future research would benefit from additional exploratory efforts, when conflicts consist of rapid territorial losses and gains, accurate measurement can easily undermine analysis (Offenhuber 2018).

Another lens through which to view targeting decision dynamics is to consider whether it varies when territory is held or lost. In a series of articles, De la Calle and Sánchez-Cuenca (2011; 2012a; 2015) made multiple efforts to distinguish the relationship between tactical decisions and the combat environment insurgents face. They made some reasonable arguments that are consistent with the notion that an exploration of territorial control may facilitate a richer understanding of violent insurgent behavior. Other scholars have turned their attention in a similar direction (Tao et al 2016; Ash 2018; Carter 2016). An example can be found in the observation that the LTTE (Liberation Tigers of Tamil Eelam; the "Tamil Tigers") tended not to use terrorism against civilians within their territorial zones of control (Lewis 2012: 94), although they did use what Thornton

(1964) calls "enforcement terror" to consolidate their power and eliminate challengers to their authority.[4]

Signaling can be a costly endeavor, in quantitative terms of accurate payload delivery and resource expenditure versus reaping the intended qualitative rewards (e.g., instilling or escalating fear, advertising the cause, demonstrating tenacity, etc.). Yet, it isn't necessarily the ideal prism through which to view NSAG targeting behavior. For instance, Chapin (2021) finds that signaling through symbolic communication when wielded against IDPs (Internally Displaced Persons – the most purely civilian targets) in Nigeria yields the lowest casualties and highest rates of failure. Despite NSAGs tending to behave in a rational manner (Marchment 2019), it is possible that intentional signaling may not be foremost in the minds of NSAG leaders. Of course, deception of one sort or another may also be afoot, which is a means for deliberately obfuscating the true purpose of an act, such that the ability to decode the encoded message generates confusion.

Given the foregoing analysis, it becomes clearer that some rationale beyond threat perceptions gives rise to civilian targeting. Target selectivity (also known as target discrimination) reveals a different set of preferences, as it describes the behavioral inclination to opt for one target type at the expense of others. Kalyvas (2006) argues that selective violence is most likely to occur in areas that remain contested between insurgents and incumbents, which reflects insurgents' consideration of the battlespace in which they operate. Although he classifies "suicide missions" as a

[4] My initial inclination was to test two hypotheses on the basis of this logic. I have dropped them as a consequence of the difficulties I encountered when attempting to code territorial control as a variable, which I addressed earlier. Those hypotheses, which should still be considered in further research, are H1: *As territorial gains are made by insurgents, there should be less suicide bombing against civilian targets within areas in which they wield substantial control. This does not preclude its use against civilians beyond their zones of control.* H2: *As territorial gains are made by insurgents, there should be more suicide bombings against security targets within areas for which sovereignty is contested (being gained or lost). This does not preclude its use against civilians, but I expect the ratio to reflect a biased application toward security targets.*

form of indiscriminate violence (170 – 171),[5] describing them as "indiscriminate" intimates a sense of randomness in target selection. Certainly, in many cases the individual victims might be random, but the fact that they're victims of a certain type tends to be a feature of discriminatory targeting; the LTTE used suicide bombings to great effect for their assassination objectives. As Thornton (1964: 82) reminds us, terrorism "is most effective when it is indiscriminate in appearance but highly discriminate in fact." Suicide bombing is a form of *selective* violence because target sets are deliberately chosen on logical, mostly organizationally-derived, grounds. Anyone reading accounts of failed or foiled suicide bombers can easily see that there is rarely a sense that they were casually meandering about with a bomb strapped to their chest.

In terms of selective (discriminate) violence via suicide bombing, or attacks of any sort, a Sunni group attacking a Shi'a mosque (or vice versa) is not randomized targeting, nor is Hamas deliberately attacking a Jewish Passover Seder. Both lack the sort of random (indiscriminate) consideration for the predictable composition of the targeted victims.[6] They also reflect a deliberate decision to allocate a somewhat unique weapons type, while forgoing alternatives. For instance, an organization might have chosen to place a bomb on a timer at a designated location (such as in the two above examples) and await its detonation. Yet, it is something extraordinary to send a human to his/her death in order to complete the mission of killing others. The logical question one might pose is to ask why the means of attack was chosen in such a way as to eliminate a scarce human

[5] Kalyvas (2006) discusses the calculated nature of mass violence and the fact that, in civil wars, territory becomes fragmented (monopolistically controlled zones) and segmented (mixed sovereignty zones).
[6] For the sake of contrast, some examples of indiscriminate violence would be a riot (yet this too can be somewhat discriminate in choosing where and against whom to riot); an assault/murder by one who is seeking entrance into a gang; a regime crackdown (if we allow for the consideration of state behavior) that targets no specific population, yet aims to demonstrate resolve; bombing by one organization against a mass transit target in a country with which one has no expressed grievance, in an effort to gain attention for their cause.

resource (the bomber). This question has traditionally been answered by depicting the human as a "smart bomb," (Hoffman 2003) or precision guided munition, which speaks to a logic of accuracy.

Accuracy appears to explain a lot, but attack-type selectivity seems to offer a better explanation of the underlying rationale that could plausibly accompany the use of an explosive-laden human to incinerate and maim other humans. For instance, there is the psychological effect that repeated exposure to such attacks can have on the victim class (Tomlins et al 2016), which is not well served by an accuracy explanation. Extreme violence in general, such as widely publicized beheadings or routine suicide bombings, can scare the hell out of people, the police and the military included, but it is civilians who are normally defenseless and unable to respond with force.[7] While the precise psychological and emotional impact can't be measured, one can reasonably assume it to be harmful beyond the singular event.[8]

Another explanation for target selectivity might be related to cost effectiveness, or an economy of force logic. If success is deemed by an organization to consist of at least one dead enemy per one dead operator, then ten, twenty, or one hundred dead enemies represents a rate of success commensurate with its ratio of dead friendlies to dead enemies. In both ways, psychological/emotional and cost-benefit, suicide bombing might be viewed as a force multiplier,[9] but this is not synonymous with its tactical efficacy (Mroszczyk 2019).

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[7] A number of authors have recognized that IS's use of extreme tactics caused the wholescale abandonment of Mosul in June, 2014; e.g., Krause 2018b.

[8] Of course, an analysis of traditional and social media coverage might be used as a metric, but that coverage may also be driven by profit and ideological motives that amplify, rather than reflect, its impact.

[9] Here, I'd like to offer a personal anecdote from my military service in Iraq. In attempting to defeat the IED (Improvised Explosive Device) menace in Iraq (2006 – 2007), I focused on the behavior of insurgents in developing my threat analysis. To that end, I was trained to use a laser targeting capability to place hellfire missiles on targets I deemed worthy of destruction. As the kinetic lethal action was legally and morally mine alone, I once posed the question to a senior military member regarding the wisdom of using a $50,000 device to kill a single enemy combatant. The answer provided to me made sense in both mathematical and moral ways. Mathematically, the maximum insurance payout for a

The expectation of a rational entity would therefore be that if certain tactics appear to yield diminishing marginal returns (for the stated objective), one should be able to detect rationally maximizing behaviors to follow, such that the practice itself should be discontinued, or a shift in its use should be observable. Conrad and Greene (2015: 548) express a similar logic in their discussion of outbidding: "… if it becomes more costly to use a particular tactic, or if the benefits of that tactic decline, terrorist organizations should seek alternative tactics." This is to say that, in general, when costs appear to outweigh benefits the decision to continue incurring greater costs should be offset by the recognition that feasibility is too strained and a cessation or reorientation is in order.

Choosing to send a suicide bomber as a single-use resource, that automatically depletes one's stock, seems to be both a costly signal and an index of values. One might be taken aback by an assertion of costliness. After all, a commonly held assumption is that the cost of a suicide bomber could probably be viewed as an efficient expenditure of funds. It requires a minimal input in explosive materials, planning and logistics, and the human capital costs are generally borne by the families of suicide bombers. In essence, for minimal input, one can reasonably expect a high yield return on what amounts to a short-term investment. Hoffman (2003) had a point when he noted that suicide bombings "probably cost no more than $150 to mount" and, citing a Rand study, that

dead U.S. soldier was at the time $450,000 and one also had to consider the cost of having trained the soldier up until that point. Medical care could easily exceed those figures, if the soldier survived an IED blast. On moral grounds, any dead enemy was worth more than a dead friendly and ensuring the former would theoretically prevent the latter. Both mathematically and morally, the logic becomes even more palatable when one considers that one enemy combatant could plant (or activate) more than one IED and kill or maim more than one soldier. Hence, it was not only cost effective to use a single anti-tank missile to kill a single person, it was preferable to do so given the parameters of "prospect theory" (Kahneman and Tversky 1979), which holds that a loss is more painful than a gain is pleasurable. Avoiding friendly losses is normally a high priority in combat, but for the organization that uses suicide bombing the reverse is seemingly true. This is because the value placed on the death of one's own personnel is higher than the value of that same person's life. This calculation is amplified when one considers the damage one person can do to a group of targeted individuals.

"on average [they] kill four times as many people as other terrorist acts." In the Palestinian case, he was likely correct. Some basic hardware and short-range logistics *were* likely the main expenditures. However, when one considers the effort being expended in places such as Iraq, Syria, Afghanistan, or Yemen, there is a host of other considerations to take into account. For one thing, logistics are considerably more complicated, particularly when foreign fighters are doing a great deal of the dying while killing. Online or in-person recruiting, border bribes, smuggler payoffs, and operational security during transit, are just some of the implicit costs.

Costs in the more recent combat environments also differ from the Palestinian case in terms of human resources. Factors to consider are that provisions must be made for longer term food sustainment, some probable engagement with in-house indoctrination, as well as grooming and refocusing efforts to ensure the bomber remains on track. Lest one forget the family stipend for suicide bombers, which may or may not be a motivating factor in initial recruitment. For the above reasons, the cost of deploying a human precision-guided munition could therefore be conceived of as rather low when logistical lines are short and recruitment is driven by locally derived sources and grievances, as in the Palestinian example. Otherwise, it isn't so clearly inexpensive.

Beyond logistical and personnel costs, there are opportunity costs to consider. For instance, I look at the suicide bomber as both an implement of warfare and a specimen of human capital. When a person is used for a single self-destructive mission, by definition there must be some form of general understanding that their use will not be allocated to any other operations. There is an inherent calculation to be made with regard to targeting prerogatives, which might not be so easily conceived of as "cheap." An example would be the choice between lobbing several artillery shells at

a target or sending a suicide bomber. For an indirect fire mission, the reusable non-human capital is a long-range piece of equipment for which many projectiles (present and future) could be reloaded if they were not crude single-use launchers. In the case of the human bomb, the "good" so to speak, is consumed on the spot. This is so whether the mission is a success or failure. One can fire thousands of rounds through a single piece of artillery before it is repaired or retired. By definition, the suicide bomber cannot be repaired and retires from service immediately.

Target selection in general describes an allocation of finite resources, especially when considering the relative unavailability of suicide bombers in comparison with those who are assigned more common kinetic tasks (indirect and direct fire missions) or those who serve in support roles (creating and distributing propaganda, or acquiring fighters, materiel, and funding). With regard to incumbent forces as targets, the asymmetric distribution of forces naturally requires a degree of prudence in terms of where and how they choose to expend their resources. Similarly, with respect to competitors as targets, a need to reduce or coopt them is a necessary step for consolidating gains and dominating the space. In either case, such decisions are an expression of NSAGs' perception of the battlespace and their capacity to adapt to changes within it, or mold the conflict environment to suit their needs. Therefore, disaggregating and analyzing targets by set is one means to understanding how insurgent organizations decide to act.

As I reviewed earlier, with respect to Pape's "strategic logic" theory, he made the case that suicide bombing is a strategy that is accompanied by some form of logic. This is a good starting point, as it implies a certain degree of rationality (Sprinzak 2000; Lake 2002).[10] If an organization is

[10] See Atran (2006) for a nuanced argument about what is and isn't so rational about suicide bombing.

rationally calculating then they should be concerned with their collective survival (Montuori 2000), even though a portion of their members are intentionally dying (Acosta 2016). One might still correctly view them as strategic calculators, who are pursuing such aims as autonomy, secession, regime replacement or ineffectiveness, or the ejection of an occupier. While of these aims represent visions of an end-state (however far-fetched), it does not mean that organizations exercise what amounts to a suicide bombing strategy, as the practice is clearly not used by most groups to achieve them. It is an intentional and purposeful act that some groups wield as a means for signaling (Hoffman and McCormick 2004). Changes to its use reflect a sense of what the entities believe it can accomplish with different target sets.

Although perceptions are often incorrect (Jervis 1976), information is imperfect (Simon 1965; 1978) and judgments can be biased (Tversky & Kahneman 1974), it is reasonable to think that decision making in combat is premised on the notion that one must seek to exploit their enemy's vulnerabilities and project power in accordance with the furtherance of one's desired goals, however short-sighted they might turn out to be. If states regularly act militarily on misperceptions of the relative distribution of power (Van Evera 1999), it seems plausible that NSAGs, with less robust resources to militate against folly, should exhibit similar behavior. Thus, the notion that organizational fantasies about gains to be achieved by military action is commonplace and one can expect violent actors (state or non-state) to perceive and misperceive the threat landscape, while acting on their interpretation of it. Insurgents often misjudge *others*' strategies when contemplating their own (O'Neill 2005: 45).[11] Those who use terrorism (Abrahms and Lula 2012; Abrahms 2020) and those who use suicide bombing (Mroszczyk 2019) seem to be guilty of a similar pathology insofar as they believe their violent actions will bear fruit.

[11] O'Neill also notes that insurgents are quite capable of misjudging their own strategic requirements (63 – 64).

Targeting Civilians

Confronting threats isn't the only causal mechanism for target selection or changes in targeting priorities. When used against civilians, signaling seems to also be occurring, but balancing against them would be a strange conceptual contortion, as there is no physical threat against which to balance. Therefore, *signaling* the balance of power might not be the best means to conceive of NSAGs' violence toward civilians, but rather their *actions* might better be understood as *indices* that allow the analyst to peer into the decision-making process. Such decisions might be based on a perception of who the civilian population tends to support (Hirose, Imai, and Lyall 2017).[12] Their observed rhetoric, particularly regarding attack claims, may shed light on the constituency toward whom the discourse is aimed; thus, revealing something about an organization's internal dynamics (Gabbay and Thirkill-Mackelprang 2010). Targeting decisions might also be a reflection of organizational stability, such that more stability may result in a diminution of civilian targeting (Katagiri 2019). Therefore, a consideration of the embedded message, whether intentional (signals) or not (indices), should accompany any evaluation of targeting choices and changes that are made to them.

Evaluating the Importance of Suicide Bombing Targets in Insurgencies

In considering target types, I make a few plausible assumptions. First, that neither targets nor attack types are chosen at random (except in the case of premature detonations). Secondly, when changes occur over time, they likely reveal something about insurgents' perspectives on where they

[12] Although the study is confined to IED attacks in Afghanistan, my personal experience in Iraq (2006 – 2007) was that once the allied counterinsurgency plan began to bear fruit, it became more common that civilians would indicate where the IEDs were placed (even drawing in the sand for overhead aircraft to take notice). It is a two-way street in that civilians might in some way use the insurgents' IEDs as a means of facilitating a shift in the balance of power.

think it is best to direct their violent efforts. Taken together, these choices reflect a value being placed on both the target chosen and the means of attacking it. This is especially so when finite resources are directed in a manner that might be considered as best reserved for the worthiest endeavors.

If several of these scarce resources are disproportionately distributed toward particular types of targets, evidence of patterned behavior speaks to a potentially discoverable calculus. Therefore, studying *how* insurgents use their scarce resources against select target types should help to explain *why* they are doing it. This point will be revisited when I consider (in later chapters) the use of suicide bombers under failed or foiled conditions. When experiencing diminishing marginal returns, one should expect that making a conscious choice to expend more resources on it is either crazy, desperate, or evidence of an abnormal cost-benefit calculation that deserves some exploration. An alternative explanation might be related to tolerance thresholds, in that they are simply higher for some groups, whereas for others the first signs of a negative return on investment might induce them to quit earlier.

Mroszczyk (2019) considers the oft-cited degree of lethality (he terms the "lethality ratio") that undergirds the common assertion that organizations use suicide bombings because it is more likely to inflict fatalities than other attack methods. He finds that although it might appear to be more deadly at the macrolevel, hence successful in terms of the perspective one would expect from a rational "political utility maximizer," it is "suboptimal" when considered alongside other non-

suicide tactical options.[13] There are nuances to consider, such as the geographical region in which suicide bombings are carried out. There are also alternative methods of mass murder (including both bombings and firearms assaults), which when weighed against suicide bombing alone are sometimes far more lethal. There is also the consideration of target types against which suicide versus non-suicide bombings are carried out. Mroszczyk calls into question the opportunity costs associated with the use of suicide bombers, who otherwise might have continued a firearms assault and not ended their mission with a single (sometimes misplaced) blast.

Methodology

Research Design

In analyzing targets that are attacked by suicide bombers, I first observed that there were often targeting changes that deserved further scrutiny. In order to test what might be causing target selection shifts, I initially sought to explore a number of independent variables (territorial losses/gains, force parity/disparity, and external intervention) that would speak to the threat landscape faced by insurgents. That approach presented me with some crippling difficulties. The main problem arose when I sought to acquire accurate data, so as to assign a value for each of the variables. It turns out that the private sector, including private-public entities, do not make this information available. Even when they do so, the data is inconsistent and incapable of being systematically applied to show a meaningful relationship with other variables. I demonstrate how this impediment manifests itself when I present tables based on ACLED data. Even when such data appears on maps, macro representations tend to obfuscate what is happening at the local levels.

[13] He makes a number of important points regarding the approach scholars have taken. For example, many err in assessing "outcome goals" as the standard metric for gauging success or failure, when it is "process goals" that can easily be more prominent in the minds of suicide bombing organizations. He states, "tactics can be effective even within ineffective campaigns or failing strategies. Similarly, tactics can be ineffective within campaigns or strategies that ultimately achieve the desired end state" (349).

Given the data issues, the resolution for which future research may benefit, I opted for an alternative approach. I do this by conducting a time-series quantitative assessment of the targets against which suicide bombing is used in a variety of conflict settings, as well as certain characteristics of the targets (e.g., its physical threat capacity, which I operationalize as a Physical Challenger Threat – PCT – variable) and the means employed against them. I also look at other discernible factors, such as whether attacks were singular or plural, what types of bombs were used (e.g., vehicular or body-borne), how many bombers were assigned the task, and whether combined arms were used. I do this by reconfiguring two primary datasets to reflect this unique group of variables, while scrutinizing their interaction to gain insight into the ways suicide bombing has been employed by various entities. In approaching the topic in this way, I believe my work provides insight into violent non-state organizations' behavior in generalizable ways, even though I still believe that future research would benefit from including the original variables I sought to analyze.

I'm not approaching the topic of suicide bombing (or violence in general) on exclusive definitional grounds as either a form of terrorism or guerrilla warfare; although my own sense is that a *target-centric* definition would depict either as being oriented toward civilian or security entities, respectively. Rather, the process inherent in evaluating the types of targets that suicide bombers attack, and in what manner they do so, positions me to better discern the underlying decision calculus suggested by its patterns of use.

Although earlier studies of terrorism were largely qualitative (Silke 2001), more recent scholarly attention has shown some improvement (Crenshaw 2014), particularly through quantitative analysis (Silke 2008) more regularly drawn from open sources (Dugan & Distler 2016). Studying terrorism at the individual level of analysis has produced mixed, and perhaps flawed, results

(Sprinzak 1990; Victoroff 2005).[14] Getting too close to one's subject of study has long been known to present the researcher with unique challenges (Gouldner 1968; Lumsden 2012). Studying terrorism in close quarters can also skew individual psychological studies (Horgan 2012), sometimes exposing one to unforeseen moral hazards (Orsini 2013). However, this is not to say that micro-level studies yield no value. On the contrary, when properly conducted, terrorism investigations sometimes produce valuable insights (e.g., Post, Sprinzak and Denny 2003).

Sometimes scholars may conflate the motives of individual terrorists, for example in considering their recruitment as Abrahms (2008) did, with the objectives of the organization as a whole.[15] I find, as do others (Hafez 2006: 55), that such a convergence of analytical levels in this instance dilutes the strength of one's argument. My critical sentiment is apparently also shared by Chenoweth et al. (2009), which includes a reply by Abrahms himself. If I were to investigate a small number of terrorist attacks, or a handful of suicide bombings, I might find it more useful to consider individuals' claims for engaging in violence. However, the approach seems to hold less promise as the number of attacks increased dramatically, and as the practice itself began to look and feel more organized.

In this dissertation, I use a means for studying suicide bombing (for which some instances are clearly terrorism and some are not) at the organizational level, in the hope that new knowledge

[14] McCormick (2003) notes that terrorism has been studied from the strategic (instrumental choice), organizational (internal dynamics) and psychological (individual) levels of analysis.
[15] Although it is beyond the scope of this dissertation, he makes some errors of fact. Some examples would be his misattribution of the al-Aqsa Martyrs Brigades as an entity distinct from the Palestinian Authority, or Fatah more properly. He also downplays Hamas as merely a "spoiler" (87), presumably to fit with his claim on 86 that "terrorism is an extremism of means, not ends." Perhaps the group's charter should be revisited for a list of their annihilative aims.

will be gleaned from distinguishing its use under varying circumstances. Examples of the efficacy of this approach in terrorism studies abound. For instance, groups as disparate as ETA and the IRA have tended to attack either indiscriminately or selectively at different points, under varying conditions that inhered in the conflict cycle (Behlendorf, LaFree & Legault 2011/2012). In that spirit, I pursue two methodological tracks.

In order to distill the differences between groups using suicide bombing, I pave the way for process tracing by conducting a quantitative time series analysis of the organizations' targeting decisions (e.g., see Benmelech and Berrebi 2007 for a narrowly focused study with a similar aim) using the Global Terrorism Database (GTD). Here, I adhere to the notion that combining research approaches in the study of insurgencies is a pathway to more fruitful discovery, as proffered by other scholars (Sambanis 2004 and Checkel 2008; 2013, 3 – 30). Although I'm familiar with groups that have been leading suicide bombing practitioners since its modern use in the early 1980s, and have briefly outlined their history in the introductory chapter, the main thrust of my attention is heavily directed toward insurgent organizations that have recently used the tactic in greater quantity. In general, the quantitative element of my research design consists of both descriptive and inferential statistical analyses, followed by a battlespace-relevant exploration of what it might mean.

Since I have noted that part of the problem with studying suicide bombing is that the analysis is often Overtaken by Events (OBE), I naturally concentrate on recent players (e.g., IS and al-Nusra), but I also took a brief comparative look at past leading practitioners (e.g., LTTE and Hamas). This dual approach should enable not only within-group/within-conflict comparison, but between-group comparison for entities engaged in similar behavior in different conflict settings. Again, the main focus continues to be on recent large-scale insurgent uses of suicide bombing.

Defining What is to be Measured and How

I define suicide bombing as one or more persons exploding their bodies, while attacking a target of any sort (in common with Ganor 2000: 6, Horowitz 2015: 71 – 72 and Lewis 2012: 17 – 19;). For methodological reasons, I'm referring to the activity as "suicide bombing," which helps me to focus on the behavior, while avoiding the use of value-laden language such as "homicide bombings" or "martyrdom operations" (Moghadam 2006b). Ward (2018) places quotations around terms such as "suicide" and "martyrdom" with regularity, so as not to grant legitimacy to any interpretations that might depict her in a biased manner. I'm not so inclined, as suicide bombing is precise and martyrdom is an imprecise attribution of something altruistic to a combined act of killing and dying. Homicide bombing is a deficient descriptor because it skips the suicidal portion of the act. One could describe a behavior as suicidal homicide or homicidal suicide, but this description allows for the possibility that one may have wished to survive. Arriving with a bomb strapped to one's chest or in one's vehicle leaves little doubt that the attacker intended to die.

For the sake of clarity, I leave aside acts that are said to be *suicidal* in nature for a specific reason (e.g., see Lankford 2014). As many engaged in combat might expect not to return alive from their missions, the researcher who draws the line with regard to others' expectations is in danger of adversely impacting the integrity of the study. Therefore, if I were to encounter attacks that are coded as "suicide," but fell short of the attachment of an explosive device to one's body (BBIED) or vehicle in which they are traveling (SVBIED), I would deliberately avoid the introduction of a contaminant and note the exclusion. As it turns out, for the period under study, the GTD contains no weapons type other than "explosives" for all suicide bombing events in Iraq, Syria, Afghanistan,

and Yemen. For ACLED data, I specifically used key words that included the use of explosives to generate the events I would consider. Consequently, all suicide attacks I looked at were bombings.

As indicated above, suicide bombing can be conceived of as both a tool of terrorism and an operational-level combat tactic, but the distinction I make rests largely on the targets to which it is applied. Since the nature of my inquiry is to gauge organizational adaptation, by way of the relationship between attack types and target types in a given battlespace, the time-series approach allows me to contextualize operational-level gains/losses over time. In other words, I'm not simply saying who hit what targets in toto, but when they did so and at what points their behavior changed (if it did at all).

While I look at the data on suicide bombing as one attack type, I also compare other attack types that may or may not accompany its use. The non-suicide attack typology I will employ generally includes two types: First, *direct armed assault* by use of any sort of muzzled weapon (e.g., pistols, rifles, shoulder-fired and crew-served arms), edged and line-of-sight close-proximity weapons. For coding purposes, the use of mechanized or wheeled vehicles, such as tanks or APCs, respectively, will be considered in the direct armed assault category. A second assault type is *indirect-fire weapons* (e.g., mortars, rockets, or artillery). Despite whether suicide bombing is used, in any case where more than one assault type is used, it will be coded as "combined arms." Therefore, *direct* plus *indirect* fire is a combined assault. So is suicide bombing plus either *direct* or *indirect* fire. I consider "combined arms" to represent a measure of complexity and intensity that characterizes the degree to which an organization is deemed to be an advanced combat participant. This task is rather easy and one example of my initial consideration of data in the case of Iraq appears as follows.

In terms of the target set, I define four distinct categories: *civilian, security, political, and armed competitors*. For the *civilian* target set, I combine a number of target types that are offered by the GTD: "Private Citizens & Property," "Business," "Educational Institution," "Food or Water Supply," "Journalists & Media," "Transportation," and "Utilities." This target set is mostly defined by the fact that the targets themselves have no (or little) military value. Some might argue that there is a certain randomness to the targets. However, to make such an assertion one would have to demonstrate that attacks against certain sectarian (or religious out-group) targets are truly random. The individual human targets might oftentimes be described as randomly selected, but it seems incorrect to regard them all in terms of an overall quality of randomness (see my selective violence argument above). I consider attacks against this target set to be acts of terrorism and not guerrilla warfare per se.

At the other end of the spectrum lay the *security* target set, which consists of "Military" and "Police" target types. These entities are assumed to be armed and capable of self-defense, as they represent the state's capacity to exercise its sovereignty through force. I do not distinguish whether either entity was armed at the time they were attacked, for the simple reason that from the time one begins the recruitment process an assumption of risk can reasonably be associated with their position. On the surface, it may seem inappropriate to consider a group of unarmed police or military recruits to truly represent the state's security apparatus, but the fact that their vulnerability wasn't accounted for by the host forces doesn't diminish their status as combatants of some sort. However, should a civilian locale, which is known to host off-duty security personnel, have been attacked, I regard the attack as terrorism (e.g., the 1986 Berlin discotheque bombing). The attendant logic is that a reasonable person would likely know that civilians would/could be present. To proceed with an attack despite, or because of, this target's large civilian composition places the act

more firmly in the terrorism category. Despite this caveat, I consider attacks against the security target set to be guerrilla warfare and not terrorism per se.

My consideration of the *political* target set includes "Government (Diplomatic)" and "Government (General)" GTD target types. They are distinguishable from security targets in that they are believed to be unarmed for reasons related to the reasonable expectation that they will be protected by security personnel. I recognize that some attacks against *political* targets also feature *civilian* and *security* deaths. While it may be difficult to gauge whether the political person was the primary target of the assault, according to the GTD codebook the coders have made this determination. I have made additional efforts to verify their work and document any re-categorization, which on rare occasion I had to execute. The standard for such a decision is that evidence would have to reveal that a political person's presence was either random, or somehow unknown to the attacker. I consider attacks against this target set to be most closely associated with terrorism and to be less similar to guerrilla warfare.

Armed competitors are composed of two GTD target types. Here, I collapse both "Terrorists/Non-State Militia" with "Violent Political Party" into this category. It is important to note that dichotomous consideration of an incumbent/insurgent competition misses the fact that there are often a multitude of insurgent entities that engage in inter-group violence (Fjelde and Nilsson 2012; Conrad and Greene 2015). Again, it matters not if they were armed at the time they were attacked, as their own failure to tend to their security does not inherently undermine their status as combatants. I consider attacks against this target set to be most closely associated with guerrilla warfare and to be less similar to terrorism.

Two of START's GTD target types remain unresolved, but in my analysis I am able to explain some of the reasons they were categorized this way. They are "Other" and "Unknown." As with the rest of the forgoing typology, I have abided by the rubric that START's GTD applies (as set forth by the GTD's codebook).[16] Therefore, I sought to identify whether either of the two target types could be properly placed into one of the four main categories. If they could not, I indicate that. I also considered any significant variation in data between START's GTD, ACLED, SAND, and CPOST's SAD to be indicative of the potential for a necessary merging of datasets and/or further cleaning of the raw contents in the GTD's data. In the end, I didn't feel it was practical to merge data, but I did occasionally re-code ACLED data by consulting the other datasets. I also compared both GTD and ACLED, where there was an overlap, in order to draw out discrepancies and report my findings in the appropriate chapters.

In each data chapter, I use descriptive statistics to highlight a series of questions that I endeavored to answer with inferential statistics, or some other means of analysis that is based on others' empirical or anecdotal work. I then conducted substantial data analysis and explained variations in the use of suicide bombing. I'm cognizant that some organizations have employed it mostly for terrorism, whereas others have done so as a means to cope with what they perceive to be the battlefield threat landscape. In either scenario, I have not assumed, nor have I asserted, that an organization must be described in pure terrorist/insurgent binary terms. However, the manner in which they employ suicide bombing should reveal something about their underlying intentions, which I address accordingly, as it is the main focus of this dissertation.

[16] The codebook can be downloaded from the GTD website at https://start.umd.edu/gtd/. The October, 2019, version I used was downloaded on July 5, 2021.

I have observed that organizations modify their mixture of tactics over time. Such an altered approach appears to be in response to battlefield conditions (e.g., the enemy has erected an insurmountable barrier or there is a shortage of suicide bombers), or as an artifact of an organization's changed philosophy (e.g., a group no longer feels suicide bombing is useful or practical). I accept that my explanations might be proven incorrect, but having analyzed the data I feel confident that they're not far from the mark. I have embarked on mostly uncharted territory by conducting case studies involving suicide bombing in Iraq, Syria, Lebanon, Afghanistan, Nigeria, and Yemen. To that end, I use both the GTD and ACLED data to guide my investigation, which is often an exercise in process-tracing (Van Evera 1997, 49-88; George and Bennett 2005, 205-232).

Operationalizing Variables

I had initially sought to conduct a multiple regression analysis, which considers suicide bombing as the outcome variable and civilian, security, competitor and "other" targets as independent variables. These target types are useful if one simply wanted to show a correlation between them and whether or not a suicide bombing is carried out. However, they seem insufficient for studying additional conditions that might independently impact the decision-making process.

To conduct an analysis such as this would have been intellectually dishonest. The reason is that I would have proffered a null hypothesis that there is no relationship between the type of target being attacked and the decision to use suicide bombing to attack it. This would have been followed by an alternate hypothesis that the type of target being attacked determines whether or not an entity would use suicide bombing. Yet, I would still have to deal with the relationship between the

variables as being predicated on the conditional acceptance of suicide bombing as a practice by the organization.[17]

I note this conditionality for the simple reason that if conclusions were to be drawn from studying a suicide bombing outcome by a variety of groups, many (if not most) of whom do not accept the practice, they would be corrupted. For example, had I wanted to look at an insurgency in South America to understand whether target types predict suicide bombing, if the latter were not in use, we would have an automatic null hypothesis. It is also a deficient pathway to study multiple entities engaged in a civil war in search of a correlation coefficient, since some may use it and some may not. Therefore, the best approach is to consider organizations that use suicide bombing as a given condition for analysis to see if a correlation coefficient illuminates other aspects of their targeting preferences.

I conduct my inferential statistical analysis based on ACLED data. Although ACLED does not indicate directionality (who attacked whom), they do attempt to indicate the primary and secondary members of a conflict dyad. It is a curious arrangement, since their *notes* tend to indicate directionality and can be extracted for coding and analysis, albeit at a heavy cost in time and effort. Therefore, I was able to assign attacking parties' names to groups, inasmuch as I was able to cull such data from the narratives embedded in the database.

[17] My concern is that too few groups use suicide bombing, so a regression analysis would have too few samples from which to generalize. I do this with the ACLED data, because I was both able to make more observations (within a shorter time span) and generate additional variables.

Combined Arms: As part of my analysis, I seek to answer the question of how insurgents responded to threats by gauging whether they applied a combined arms approach to a range of threatening actors (the PCT 0 – 6 code I will discuss shortly), which I deem to be a hallmark of sophisticated coordination. In addition, I want to know what sort of supplemental resources they used to enhance a suicide bombing attack, so I consider the use of vehicles as a force multiplier. I also want to distill whether multiple suicide bombers were used, which tells me either the significance of the target, or the perceived need to allocate additional nonrenewable human resources. This enables me to analyze whether there is a correlation between facing a physically threatening foe and meeting them with a formidable degree of force.

I built a dummy variable for whether NSAGs used a combined arms approach (0 for no and 1 for yes). This variable is an indicator for whether suicide bombing was used as part of an assault package, or just as a one-off means of attack. For statistical analytical purposes, I am mainly agnostic about when in a battle sequence the suicide bombing had taken place.[18] For instance, I did not code whether it served as part of an initial attack sequence, if it was timed to occur simultaneously with other attack types, or if it appeared to be a means to obfuscate a withdrawal, or otherwise conclude a battle. This is so for practical reasons, mainly related to temporal inaccuracy in the original coding, but also because it is rather difficult to cut through the fog of war without having had access to overhead surveillance or other classified reports on enemy TTPs. Narratives do sometimes state that

[18] This does not preclude my having analyzed an event, as documented in the database, whereby it indicated that an attacker launched an offensive operation with a suicide bombing event, or series of events. I did read all the notes, more than once. This caveat is specifically related to the realm of what is possible when coding for inferential statistical purposes.

suicide bombings were the first operational maneuver, but they are not constructed in a way that would lend support to my reporting a pattern across cases.

Target Types: I developed a series of additional codes to gauge the target types, in order to explore the hypotheses I present below. For instance, I first had to code for the groups associated with suicide bombing attacks. I then extracted the target types from the incident notes, which is how I was able to generate string variables for whether an attacked party was a competitor, security, civilian, etc. This was also combined with an effort to identify whether a foreign military was rendering assistance and to which degree it was doing so (standoff and/or direct).

Number of Bombers: I then sought to code how many suicide bombers were said to have participated in a particular event, but I had to settle for a conservative estimate. ACLED does not tally the number of bombers, nor does GTD to any measurable degree, but the narratives often contain language that allow for reconstructing what those may have been. Therefore, I extracted where there was a given number and if it implied multiplicity (bombers, SVBIEDs, etc.) I coded it as 2.[19] All other numbers were determined by precise quantitative statements the coders used.[20]

Vehicular: I also coded a dummy variable for whether a vehicle was used in an attack (1 if yes, 0 if no). The justification for coding this variable is to shed some light on whether the attackers had considered target penetrability, blast force radius, blast intensity, or any combination as being

[19] I say this is a conservative approach because any number beyond 1 person is always 2, but *could* be more. In the absence of precise language, it *could* also be only 2, but it should not be 1. I expect this approach to result in underestimates and have no reason to believe that overestimates will be generated.
[20] Where terms like "at least" were used, I took that to mean the lowest possible number. For instance, "at least one bomber" is coded as 1, "at least 2 bombers is coded as 2," and so on. If there were multiple events that constituted a single series, I distributed the count evenly among them, which means that 7 suicide bombers across 9 events would yield two events having been coded with 0 suicide bombers.

necessary. For instance, if an attacking party chose to use an individual bearing a vest, belt, or other BBIED contraption, it was more likely related to access to a target and whether it was believed to be denied the attackers.[21] It is also a matter of general understanding that an SVBIED would be expected to generate a much larger initial percussion and a more expansive shrapnel array over a larger area, depending on the terrain in which it is employed.[22] For these reasons, use of vehicles matters.

PCT Value: Finally, I developed a new ordinal variable based on the target type variable I created. It generally ranks civilians as 0, competitors as 1, security as 2, competitors with either foreign direct or standoff support as 3, security with either foreign direct or standoff support as 4, competitors with both foreign and standoff support as 5, and security with foreign direct and standoff support as 6. I call this variable "Physical Challenger Threat," or PCT.

The rationale for the above PCT coding design is predicated on a risk assessment that a rational actor might conduct in a tactical environment. For instance, civilians pose little, if any, physical risk to an organization's survival.[23] Competitors do present a risk to an entity's ground

[21] The human bearing a suicide explosive capability seems to be more a function of precision, surprise and access to a target than is its vehicular variant. Anecdotally, my experience in having read the narratives informs me that vehicles are used mainly against armor and APCs, as well as checkpoints. However, they seem to have been used for purposes that go beyond that, such as one might infer is a means of making a statement about a group's presence. This sort of behavior seems to be of the "announcement" variety when not used against hard, that is well-protected or well-defended, targets. Perhaps an entity uses it to gain attention to their cause or group, so as to garner additional support in personnel and (typically foreign) financing among those who share their ideological aims, or who find their regional or geopolitical goals to be mutually enhanced.

[22] I also recognize that this dichotomous distinction might be seen as potentially faulty. For example, some suicide vests can generate very powerful blasts that might even rival or surpass that of an SVBIED (or unattended VBIED). I accept that such exceptions exist, but do not feel they are common enough to violate the general blast radius/blast intensity rule I have described. A valid criticism might be that the inclusion of motorcycles in the vehicular category is a stretch. However, a human-driven motorcycle is still more like any other vehicle than it is a person on foot. Additionally, the commonality between all vehicles, which is distinguishable from foot-powered humans, is the sound the former makes and the stealthy silence that accrues to the advantage of the latter. The reader will recall that I'm not analyzing VBIEDs, but SVBIEDs that are occupied and mainly driven by humans.

[23] This is not an assertion that *all* civilians are innocent *all* the time, but from the standpoint of an organization that violates the laws of war by targeting unarmed noncombatants for destruction, the logic stands. There were 4 incidents in

capabilities and security elements tend to present an even greater risk.[24] Moving along the ordinal scale, competitors and security forces that possess either direct or standoff foreign military support are a greater challenge to the NSAG, but an entity having both direct and standoff foreign military support is an even more challenging prospect.[25] There are nuances that required some degree of judgment, however. For instance, target sets that appeared to be political were sometimes accompanied by security personnel and sometimes were not. The narratives in the database were a general guide to understanding the threat level associated with the target.

Regarding the PCT variable's coding, there were occasional anomalies that I had to resolve. For instance, in Syria there was only one incident that appeared to feature a foreign military standoff engagement with no recorded ground components. It consisted of an air interdiction by Turkish forces, which destroyed an IS SVBIED. That event was treated (for the PCT variable) as though it were a state security operation and was coded as a 2, as were 8 foreign military direct events, for which no other forces were recorded in the database (in Syria).[26]

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which a target was both civilian and security. In those cases, they were coded as 3 for a security threat, since a review of the incidents indicated that regime elements were part of the target set, even if civilians suffered from an attack. That is, the target did not consist of a purely civilian composition, even if civilians were among the security elements. There was also a target type that was coded as "unknown," but given my inter-database investigative efforts I was able to uncover that the targets were mainly civilians, even if the "unknown" code remained in the target type column. One more outlier was an attack by an Iraqi militia, which was supported by Russian standoff air-to-ground fire. It was coded as a 3, in conformity with what competitors supported by foreign military standoff support would be coded.

[24] Although not all competitors are equally as threatening to an attacker, all competitors must be either defeated or coopted, in order to wrest control of an area or population. Security elements might sometimes be weaker than competitors, but the assumption here is that states have a general capacity to wield greater power than competitors by way of advanced weaponry, air support, communications, budgetary allotments, munitions stockpiles, the ability to invite foreign support, formal military training and culture, etc.

[25] One might question the validity of granting equal value to direct or standoff military support, but this is because one can't say for certain that air strikes are more or less threatening than a column of tanks and APCs, or an embedded special forces unit. One can say that a state or competitor supported by both forms of foreign military kinetic support are likely going to present a risk of defeat, or annihilation, to an insurgent group.

[26] One might legitimately criticize this coding decision, but I offer the (hopefully insightful) retort that foreign military forces combined with either competitors or state security elements act as a force multiplier, but as stand-alone elements they are more akin to domestic security forces than any other threat type. If one were to assert that (direct) foreign military ground forces represents an "occupation" or "occupier" my coding approach might serve a useful purpose.

As I discussed above and later highlight in the tables pertaining to non-state or government actors seizing/recapturing territory, analysis of a territorial control variable would produce too few cases for me to analyze. Therefore, I decided to test a number of hypotheses in each empirical chapter by looking at the relationship between the four variables that I created (PCT, Number of Bombers, Combined Arms and Vehicular). The null hypothesis, plus six ideal testable hypotheses are as follows:

The null hypothesis, H(0), to be tested in each case is that there is no relationship between any of the given variables, whereas the alternative hypotheses being tested are as follows.

Ha(1): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and the number of bombers used to attack it.

Ha(2): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether combined arms are used to attack it.

Ha(3): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether a vehicle is used to attack it.

Ha(4): I expect there to be a relationship between the use of combined arms and the number of suicide bombers used to attack a target.

Ha(5): I expect there to be a relationship between the number of suicide bombers and whether a vehicle was used.

Ha(6): I expect there to be a relationship between the use of vehicles and whether combined arms were used to carry out a suicide bombing.

However, I would caution that an armed incursion is not synonymous with a long-term foreign presence across a wide spectrum of municipalities.

I use a Pearson's product-moment correlation versus another inferential statistics approach for two reasons. First, if I were to consider suicide bombing as a dependent variable, I would test each of the independent variables as they relate to it. However, this would require that I look at the full range of cases in which it did and did not occur. Due to the number of incidents found in ACLED (166,068) for the five main countries I study during 2017 – 2018 period, it is beyond the realm of my capacity at this time to consider each incident, read their narratives and distill values for four newly created variables, which themselves were constructed for suicide bombings from a series of complex steps. Of course, that endeavor would only be hampered by the fact that ACLED, unlike GTD, is non-directional and includes many state-derived actions.

Secondly, I'm not fully convinced that the choice to use suicide bombing is itself dependent on anything other than a group's acceptance of the practice. Rather, I built in the assumption that suicide bombing is a given and proceeded to see how it is used against a range of threat actors and whether there is a correlation with other variables that would enhance my understanding of its employment. For these reasons, I'm simply reporting and analyzing the strength of a linear relationship between variables, as indicated by a Pearson's correlation coefficient (r).[27]

Concluding Remarks

In the previous chapter, I sought to dispel the myth that suicide bombing is by itself a strategy, even though it might serve one.[28] In this chapter I made a theoretical case for a target-

[27] An alternative analytical approach would be to use Spearman's rank order correlation, which I did. The results are similar and are reported in the methodology chapter.

[28] The terrorism literature has yielded a number of insights regarding NSAG behavior, but it's focus tends to be on whether the deliberate killing of civilians works. There are other target sets to consider within insurgencies, which is the realm of this dissertation. Some terrorism scholars have argued that success could be defined for some as a pathway to garnering attention for a purported cause (Harmon 2001 in part, but especially Dershowitz 2002), as a tactic to suit

centric approach to analyzing NSAG behavior. More specifically, I described how this method has bore fruit in more recent studies of suicide bombing. I explained that changes in targeting priorities can be a guide to organizational decision making. I argued that these decisions can reflect process-driven intentionality; sometimes due to a desire to signal others and at other times as an indication of privately held decision-relevant information. In either case, I view suicide bombing as a tactic, which can be wielded on an operational level, to adapt to threats and to shape a conflict.

In the methodology section of the chapter, I laid out my research design and detailed the purpose of creating variables that help me explore the realm of suicide bombing across five main theaters of combat. In the empirical chapters, I use the GTD data to explain what is going on within the various conflict regions in which suicide bombing is used. I do so with descriptive statistics that take into account the above-described four target sets over the course of the years for which data is made available by the GTD. I then use ACLED data, with a number of refinements and enhancements, to test several tactical-level hypotheses. Each chapter contains a summary of my findings, which ultimately culminates with a synthesis in the concluding chapter. In the next short chapter, I use the GTD data to explore three mini-cases before I dive into the main five cases.

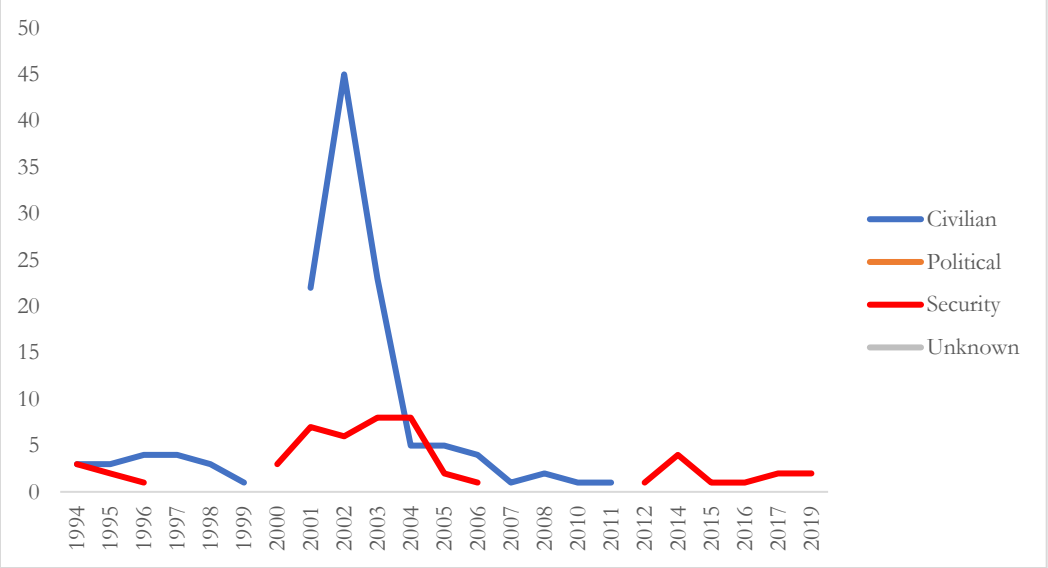
numerous strategies (Kydd and Walter 2002; 2006), or as a means to generate a sense of insecurity that also drains resources and causes intellectual inertia for those trying to understand it (Kellen 1998). These are all examples of actions aimed at achieving process goals, but they are insufficient for an insurgency that is planning to emerge victorious in a contest with a state and/or competing NSAGs. Such an end-state would require more sophisticated means of scoring force-on-force gains that exceed much of the analysis found in the terrorism literature.

Chapter 4: Mini-Cases - Suicide Bombing Templates: Balancing Against Security Threats Versus Terrorizing Civilians

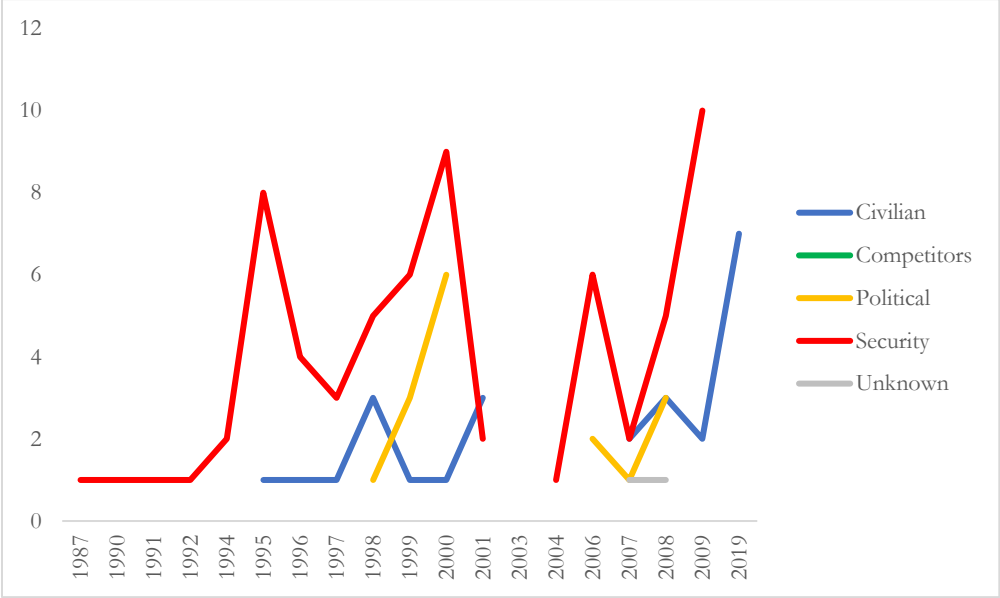
The suicide bombing universe of cases generally range from about 1981 through 2021. It might be useful to think of the four decades' long enterprise as being loosely bifurcated by 9/11/01, as the opening graphics in this chapter demonstrate. Since most of the analysis in each following chapter centers on the more recent twenty years, a comparative glimpse of the earlier suicide bombing landscape helps to illustrate how targeting preferences can be translated into analytical insights about its practitioners. Below I present the historical record of suicide bombing in three conflict environments: Israel and the "West Bank,"[1] Sri Lanka, and Lebanon. In each location, it becomes clear that suicide bombing is not carried out in identical ways. Moreover, changes in targeting and in the organizations who enter and exit the battlespace are informative. They speak not only to the degree to which groups adapt their violent behavior for different reasons, but also what aims they wish to achieve (strategy) can be recognized in the actions they take (tactics).

[1] I use quotations to denote that the location is not a named state per se, but a geographical representation of an area. It is sometimes referred to as Judea and Samaria.

Graph 2: Suicide Bombing by Palestinian Groups in Israel and the "West Bank" (n = 195)

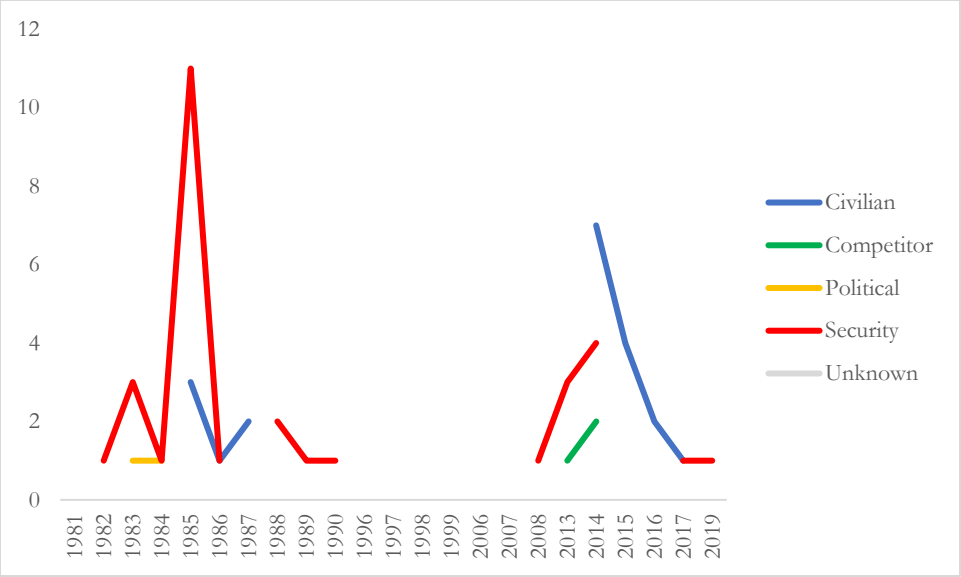


Graph 3: Suicide Bombing in Sri Lanka (n = 120)[2]



[2] This graph depicts only suicide bombings that were physically attributed to Sri Lanka and not attacks that occurred beyond its physical jurisdiction (e.g., India).

Graph 4: Suicide Bombing in Lebanon (n = 68)



Analysis: In looking at three different conflict zones, one can see some clear targeting distinctions for the various conflict zones. In the Israel and the "West Bank"[3] locale, the entities that were doing the suicide bombing changed somewhat over the course of the conflict. From 1993 through 2001, the main named attackers were from Hamas and occasionally PIJ (Palestinian Islamic Jihad), and the overwhelming majority of targets were civilians. A couple of other named entities did attack during that time, but during 2002 Al Aqsa Martyrs Brigades (of the Palestinian Authority's Fatah) began to emerge as a main competitor to Hamas and PIJ. Nonetheless, other entities (DFLP, PFLP, Ahrar al-Jalil, and Ansar Bayt al-Maqdis) also attacked. The overwhelming majority of suicide bombings in this conflict zone were against civilians (terrorism).

[3] According to the GTD, there were no suicide bombings in Gaza, which would be understandable after the departure of all Jewish civilians and military personnel in 2005. This is an interesting finding, as the availability of civilians and security forces for a period of twelve years existed in Gaza. Perhaps this was due to an access problem and penetration problem, which is plausible.

Only during 2004 were security targets apparently given preference, but the small sample size from that year (n = 15) makes it difficult to generalize the meaning of this anomaly, particularly in light of the number of entities conducting suicide bombing operations.[4] From 2012 and beyond, security targets (guerrilla warfare) were preferrable for all attackers, which included Hamas, PIJ, Ansar Bayt al Maqdis, and other unnamed entities, but not Al Aqsa Martyrs Brigade. One interesting anomaly occurred in which IS attacked Hamas in 2017 with a BBIED, but it never did so any other time.[5] The prototype for Palestinian suicide bombing was more oriented toward terrorism, particularly where access to civilians was more readily available during the earlier years of the practice's use. However, once civilians were less accessible (Israeli civilians exited Gaza and a security barrier was constructed on the border with the "West Bank") there seemed to have been a targeting change that could best be described as moving toward guerrilla warfare.

Due to their heavy reliance on civilian targeting and their once-dominant place on the spectrum of suicide bombing entities, many scholars have taken note of their achievement of process goals. Mackinlay (2009: 54 – 60) notes that the PLO, and to some extent the PIRA, had reinvigorated the 19th Century "propaganda of the deed" concept to great effect. His point is that "terrorism" was used as a primary means to advance an insurgency that could not hope to achieve land acquisitive aims. Yet, territorial control is not necessarily a complete measure of *all* NSAGs' success, although it is a pillar of most insurgencies that hope to achieve an eventual strategic win. Perhaps the Palestinians made the most headway in terms of using "terrorism" and suicide bombing

[4] Disaggregating the 2004 cases, it appears that Hamas attacked 2 security targets and 1 civilian, PIJ attacked 1 security target, Al Aqsa Martyrs Brigade attacked 3 civilian targets and was disrupted once prior to attacking an unknown target, the PFLP attacked 1 security and 1 civilian target, "unknown" attackers hit 3 security targets and were disrupted on one occasion attempting to attack an unknown target.

[5] I considered this to be an attack on security forces, due to the fact that by this time Hamas (legitimately or not) was recognized to be acting in the capacity of an incumbent regime.

to achieve process goals. However, the stated outcome goals, depending on which entity is declaring them, have resulted in a non-contiguous and extraordinarily weak "state."

Palestinian NSAGs were certainly civilian targeting pioneers and they, in addition to the LTTE, did use suicide bombing in unique ways (see my below mini-case analysis). In the universe of suicide bombing cases, however, both entities went from being some of the foremost practitioners to barely registering on the timeline of modern suicide bombing. In the Palestinian case, their access to a rich target environment was severely curtailed. In the LTTE's case, they were defeated by the state on the battlefield.

It is worth noting the long-range effects of NSAG actions that do tend to advance a number of process goals. For instance, Dershowitz claims the Palestinian cause has garnered great benefits from late 1960s and early 1970s terrorism, especially in Europe (2002). Merari (1993) notes that terrorism "… has had a beneficial rather than a deleterious effect on PLO's legitimacy" (27) that it "… has been a perennial part of the Palestinian struggle since the early 1920s" (31) and that it "… has always been considered by the Palestinian insurgents an integral part of the struggle" (32). More pointedly, Jenkins (2006: 128) states, "It cannot be denied that terrorism kept the Palestinians' hopes alive when Arab governments were defeated on the battlefield, that terrorism galvanized the Palestinian population and contributed to the concept of the Palestinian state, and that terrorism compelled international intervention."[6] English (2016: 246) explains it this way:

[6] Jenkins (1975: 161) makes the following observation: "Recently terrorism has been used most successfully on an international scale by Palestinian guerrillas. That there is now pressure for an Israeli withdrawal and the creation of a Palestinian homeland, that the Palestinian Liberation Organization may be accorded international recognition as the government of a stateless people is owing, at least in part, to the success of Palestinian terrorists in bringing their cause

"Yet the terrorism record overall has included considerable success at the tactical level of gaining interim concessions. So the PLO in 1974 was granted observer status at the United Nations, effectively coming to be seen as the legitimate representative of the Palestinian people and cause, in a manner unimaginable had its violence not been carried out in preceding years. Similarly, Black September's hijacking of a German aircraft in the wake of the 1972 Munich attack on the Olympics led to release from custody of the surviving Munich attackers – an interim concession of powerful significance."[7]

In Sri Lanka, security targeting (guerrilla warfare) was mainly preferrable to civilian targeting (terrorism); 56% versus 15%. Political targets represented 16% of the preference. During 2000, there was an effort to target 5 political entities as a complement to the security targets that were being struck. From 1994 to 2008 there were 5 suicide bombing attacks on competitor groups. One was against the LTTE itself, which was attributed to a splinter group: "Colonel Karuna Faction." The anomaly on the right side of the graph deserves an explanation. During the course of the conflict, the LTTE was overwhelmingly the named attacking party. They were defeated militarily in 2009 and all suicide bombing ceased. However, on April 4, 2019 (Easter), IS carried out a series of suicide bombings against exclusively civilian targets. The commonality among the targets was that they were Christian and/or Western in orientation. The prototype for Sri Lankan suicide bombing was more oriented toward guerrilla warfare, but a decade after the attacking entity (LTTE) had been defanged another entity (IS) used suicide bombing as a tool of terrorism.

In Lebanon, there appears to have been two major waves of suicide bombing, between which there were two minor series of events. For example, from 1981 through 1990 the GTD's data indicate that a wave of suicide bombing attacks transpired (n = 33), which was followed by a sparse

violently and dramatically before the eyes of the world. Without endorsing terrorism, one must wonder what success they could have won had they operated within the established bounds of conventional warfare and polite diplomacy." It used to be common knowledge that the term "Palestinian" was not a reference to a potential Arab state, but to all who resided in the area under the post-Word War I British Mandate (Peters 1984).

[7] A similar statement about the Palestinian move from domestic to international terrorism was made in passing by Enders, Sandler and Gaibulloev (2011: 34).

series of events that began during 1996 (n = 4) and lasted throughout the remainder of the terminal decade of the millennium. Another break occurred until they resumed in small quantity in 2006 and ceased in 2008 (n = 3). The next major wave began in 2013 and lasted through 2019 (n = 28).[8]

During the first wave (1981 – 1990), several of the initial attacks were attributed to Hezbollah and were (famously) carried out against military and political targets. During that period, the overwhelming majority of attackers were not from Hezbollah, but represented rival organizations such as the PLO, the Syrian Social Nationalist Party, Arab Socialist Baath Party, as well as random Palestinian and unknown attackers. As the graph indicates, the security target set was preferred above all others. Civilians were rarely targeted (n = 5), and competitors (two attacks on South Lebanese Army checkpoints) were even less common. During the 1996 – 1999 period, there was one attack each year and three of them were associated with Hezbollah (two against security targets). During the 2006 – 2008 period, there was also one attack each year, each against security targets, and two of which were attributed to Jund al-Sham (under the banner of a precursor group for AQI); one of which was foiled.

During the second wave of suicide bombings in Lebanon (2013 – 2019), an initial inclination toward attacking security, political, and competitor targets in 2013 receded as an apparent turn toward civilian targets occupied the early months in 2014. Abdullah Azzam Brigades, an entity once known as AQ in Lebanon, emerged during the 2013 attacks when they launched a two-pronged attack on an Iranian embassy and another two-pronged attack on an Iranian cultural center in 2014. During 2014, IS also launched a suicide bombing attack against civilians, but the significance of their

[8] To remain consistent across the three cases, I am using the GTD data. I should note, however, that CPOST and SAND data tend to differ.

attack was that it was aimed at a Hezbollah stronghold. Al Nusrah then launched four separate attacks on civilians, which was followed by attacks on Hezbollah and the Lebanese army. The next four attacks were against security targets and they were attributed to Liwa Ahrar al – Sunna (2), Nusrah Front (1) and an unknown entity (1). During 2015, all four attacks were against civilians and they were attributable as follows: Nusrah Front (1), Hezbollah (1), IS (2). In 2016, IS attacked civilian targets twice. In 2017, IS struck a civilian target and an unknown attacker struck a security target. No suicide bombings appeared to have occurred in 2018, but in 2019, IS assaulted a security target.

One can see in the Lebanese battlespace that the prototype for suicide bombing began as a series of actions that were more oriented toward targeting security elements (guerrilla warfare) and were typically carried out by Leftist and Shi'a entities. A metamorphosis then ensued, as the players in the game changed and a turn toward civilian targeting (terrorism) was patent. There was also a rivalry being played out between Sunni factions who were also simultaneously engaged in a battle for dominance in the adjacent war-torn states (Syria and Iraq). The sporadic nature of the targeting pattern at the end of the second wave in Lebanon seems to indicate that a decision to attack any given target with suicide bombing might have been driven by the notion that failing to do so would mean that one's currency was no longer valid.

Concluding Remarks

In sum, the Palestinian case demonstrates a propensity to garner attention to their cause. When suicide bombing was used, it was initially a civilian-centric endeavor, but as the conflict changed and the targetable civilian population became more remote, a move toward attacking

security elements obtained.[9] The Sri Lankan case is best described as a security-centric campaign by the LTTE. However, within that theater, when the players were replaced by IS, a civilian-centric aim was paramount. In Lebanon, what began as a security-centric targeting campaign was at a much later point more civilian-centric. The nature of the conflict changed and so did the main entities engaged in it. In short, suicide bombing within each battlespace varied over time. Indeed, as the ensuing analysis of various conflict zones demonstrates, organizations operating across battlespaces also change their targeting preferences over time. These material facts offer evidence that cuts against any simple one-size-fits-all theory.

[9] This analysis is limited to suicide bombing and therefore necessarily discounts other forms of attack (e.g., indirect fire such as rockets and mortars, underground tunnelling, or snatch-and-grab operations against military forces).

Chapter 5: The Syrian Battlespace – Balancing Against Security Threats Versus Terrorizing Civilians

This chapter first considers the Syrian conflict and its general kinetic contours between 2011 and 2018. The Global Terrorism Database (GTD) is used as a starting point, since it consists of collected and coded data over the longest time period. After laying out some descriptive statistics, observations are then made about what the data appear to indicate. A similar process is then followed with regard to ACLED data for the available years 2017 and 2018. Finally, an inferential statistical analysis will be conducted, which considers how different non-state suicide bombing methods had been employed against what amounts to a threat continuum, which I have uniquely coded for the first time.

I am confident that a consideration of the battlefield, which exploits and analyzes two separate databases that overlap for a span of two years' time, will yield a better understanding of violent non-state actors' wartime behavior. At least, it is hoped that this will be true for those who use suicide bombing as a choice among many attack options. For added insight, I have cross referenced the data from SAND and CPOST, where necessary and available.[1]

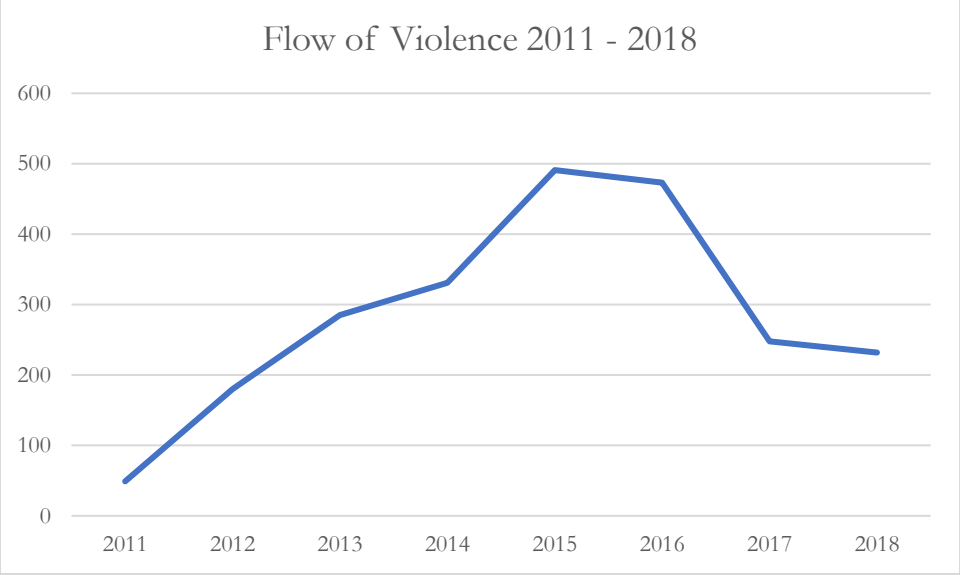
For the GTD data, the time period under consideration consists of 2011 – 2018, in line with the civil unrest in Syria and what one might view as a process in which a domestic disturbance gave way to a full-blown civil war. Since an initial glance at the data reveals that there were no attacks

[1] There might arise a question as to why I am making full use of the GTD and ACLED data and not some of the other available datasets. Although I have addressed this matter earlier, I will reiterate that both datasets were more robust than any competitor sets and they also provided more information with which to construct and analyze multiple variables. I did take note of an updated DSAT that was publicly announced in 2021, which was a replacement for CPOST's SAD; however, I have not had the opportunity to fully exploit it.

recorded during 2009 and 2010, 2011 seems an appropriate starting point.[2] ACLED data is much more limited in terms of the period it covers, but I was able use it in a unique way. It covers a period under which the full-blown civil war was showing signs of tapering in a downward fashion along the right-side of an observable bell curve (below). Analysis of both datasets has yielded interesting findings, which would likely not have been uncovered if I had only considered one over the other.

Cut One: GTD Data

Graph 5: GTD 2011 – 2018 Attack Data (without Modifications) for Syria (N = 2,289)



Note: The left side of the graph reflects a count of incidents, while the bottom consists of years.

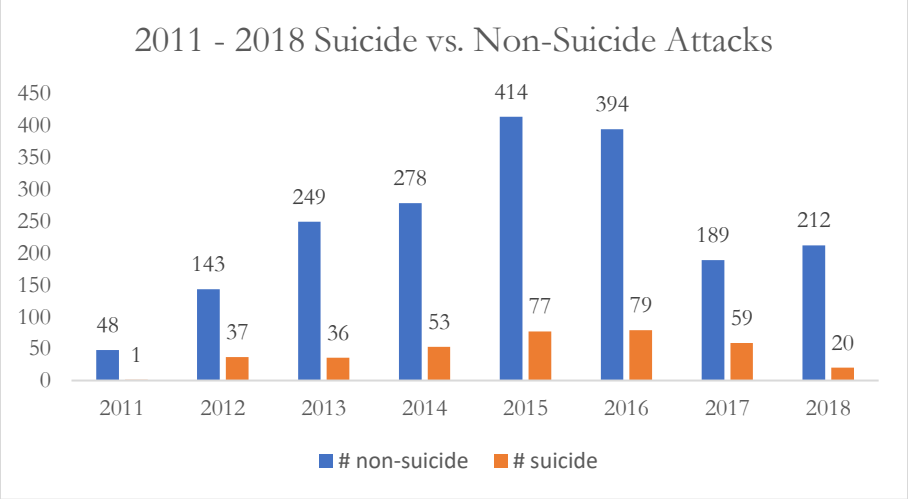
[2] There was an outlier attack recorded in Syria on September 27, 2008, which featured a large (200 kilogram) SVBIED detonating in a civilian area. No claim was made, nor were the coders able to attribute it to any particular group. It should be noted that the town, Sayeda Zeinab, is Shi'a and that suicide bombing has been mainly a Sunni oriented practice when carried out by Muslims, over the preceding decade. When consulting the CPOST database, the attack is logged as an "isolated" attack against an "Intelligence Agency Office," which is coded as a security target, and was carried out by a Saudi national named Abu Aisha. The SAND database indicates this was an attack carried out by a female on behalf of Fatah al-Islam, against "intelligence officials/Shi'a shrine." The organization is an al-Qai'da inspired, Sunni, Palestinian, group from Lebanon. This event is demonstrable of the sort of differences one regularly observes when inter-database considerations are made.

Table 3: GTD 2011 – 2018 Descriptive Statistics

Year	# non-suicide	% non-suicide	# Suicide	% Suicide	Total Attacks
2011	48	97.96	1	2.04	49
2012	143	79.44	37	20.56	180
2013	249	87.37	36	12.63	285
2014	278	83.99	53	16.01	331
2015	414	84.32	77	15.68	491
2016	394	83.3	79	16.7	473
2017	189	76.21	59	23.79	248
2018	212	91.38	20	8.62	232
Grand Total	**1927**	**85.5**	**362**	**14.5**	**2289**

Note: The "%" in totals equals the mean for each given attack type (suicide/non-suicide).

Chart 1: GTD 2011 – 2018 Descriptive Statistics



Data Analysis. One can see from the GTD's Syria data, depicted in the above chart, graph and table, that violent attacks tended to produce a bell-shaped curve over the course of eight years. One can also see that suicide attacks largely tracked along a similar path as non-suicide attacks from 2014 onward, with 2012 and 2017 being years in which it rose to above 20% of the overall mean of

attacks. However, when considering the above data, one still doesn't know *who* was doing the attacking and toward what types of targets they were allocating their resources. The below chart, graph and table make that information more readily visible.

Table 4: Syria 2011- 2018 Target Types Attacked

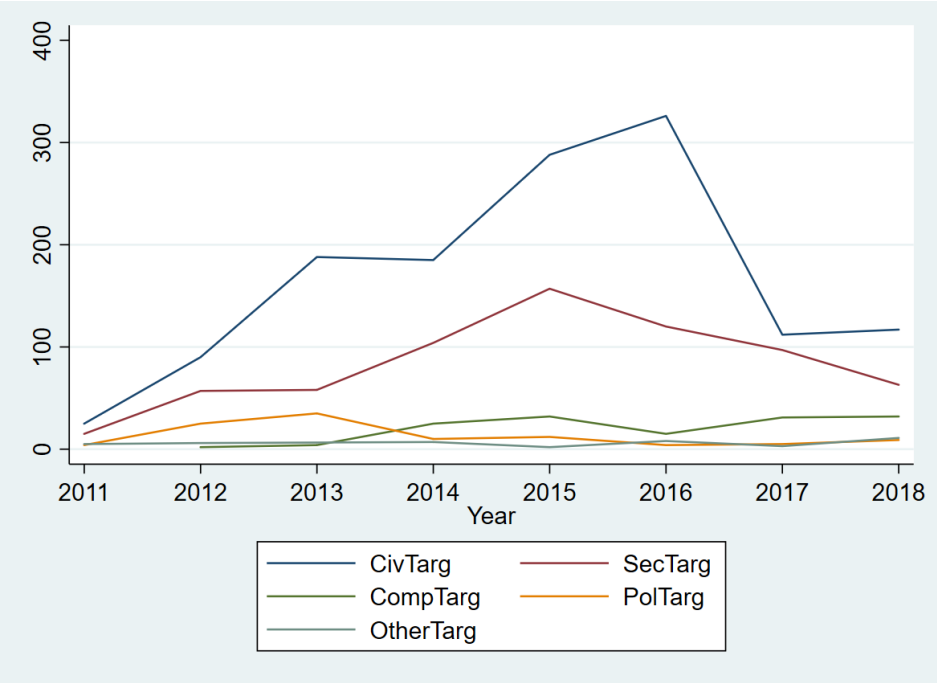
Target Type	Count	Percentage
Airports & Aircraft	4	0.17
Business	91	3.98
Educational Institution	42	1.83
Government (Diplomatic)	37	1.62
Government (General)	67	2.93
Journalists & Media	86	3.76
Military	604	26.39
NGO	28	1.22
Other	2	0.09
Police	67	2.93
Private Citizens & Property	946	41.33
Religious Figures/Institutions	73	3.19
Telecommunication	1	0.04
Terrorists/Non-State Militia	138	6.03
Transportation	39	1.7
Unknown	40	1.75
Utilities	21	0.92
Violent Political Party	3	0.13
Total	2,289	100

Table 5: Syria 2011 – 2018 Target Types Attacked (Condensed)

Target Type	Count	Percentage
Civilians	1,331	58
Security	671	29
Competitor	141	6
Political	104	5
Other/Unknown	42	2
Total	2,289	100

Note: The condensed table consists of the following reduction principle: **Civilians** = Airports and Aircraft, Business, Educational Institution, Journalists & Media, NGO, Private Citizens & Property, Religious Figures/Institutions, Telecommunication, Transportation, and Utilities. **Security** = military and police. **Competitor** = Terrorists/Non-State Militia and Violent Political Party. **Political** = Government (Diplomatic & General). **Other/Unknown** = Other & Unknown.

Graph 6: Syria 2011 – 2018 Target Types Attacked Over Time (N = 2,289)



Data Analysis: The above tables and chart provide some insight into *what* was being targeted with overall attacks (both suicide and non-suicide). Whereas, civilians seemed to be the preferred target set, until security targets nearly achieved parity during 2017, the data fail to explain what entities were attacking, nor the unique manner by which such attacks were carried out over time. With regard to which non-state entity was executing kinetic strikes, the below data shows those for whom either a claim was made, or for which coders attributed responsibility.

Table 6: Non-state Groups Attacking with Suicide and Non-suicide Bombing in Syria 2011 – 2018 (N = 2,289)

Group	Attack Count	Percentage
Abdul Qader Husseini Battalions of th..	1	0.04
Abu Amarah Battalion	5	0.22
Afrin Falcons	3	0.13
Ahrar al-Sham	28	1.22
Ajnad al-Sham	1	0.04
Al-Furqan Brigades	1	0.04
Al-Nasir Army (Syria)	3	0.13
Al-Nusrah Front	246	10.75
Al-Qaida in Iraq	2	0.09
Al-Sham Legion	7	0.31
Aleppo Fatah Operations Room	8	0.35
Ansar al-Din Front	2	0.09
Ansar al-Islam	1	0.04
Ansar al-Sharia Operations Room (Syria)	7	0.31
Ansar al-Tawhid	1	0.04
Authenticity and Development Front	1	0.04
Ayesha bint al-Sadiq Brigade	1	0.04
Diraa al-Shahbaa Rebel Brigade	1	0.04
Fajr al-Umma Brigade	1	0.04
Free Alawite Movement	2	0.09
Free Syrian Army	127	5.55
Gathering to Aid the Oppressed	1	0.04
Greater Damascus Operations Room	2	0.09
Gunmen	4	0.17
Hay'at Tahrir al-Sham	60	2.62
Hezbollah	6	0.26
Hurras al-Din	1	0.04
Incite the Believers	2	0.09
Islamic Front (Syria)	35	1.53
Islamic State of Iraq and the Levant	667	29.14
Jabal al-Islam Brigade	1	0.04
Jaish al-Fatah (Syria)	15	0.66
Jaish al-Muhajireen wal-Ansar (Muhaji..	1	0.04
Jaish al-Mujahideen (Syria)	2	0.09
Jaish al-Sunnah	2	0.09
Jaysh al-Islam (Syria)	34	1.49
Jund al-Aqsa	5	0.22
Khaled Ibn al-Walid Army	4	0.17
Kurdistan Workers' Party (PKK)	23	1
League of Damascus for Special Tasks	1	0.04
Liwa al-Haqq	1	0.04
Liwa al-Islam	1	0.04
Liwa al-Sham	1	0.04
Liwa al-Tawhid	1	0.04
Muslim extremists	63	2.75
National Liberation Front (NLF-Syria)	4	0.17
Nur-al-Din al-Zinki Movement	7	0.31
People's Protection Units (YPG)	7	0.31
Popular Front for the Liberation of P..	1	0.04
Revolutionaries Army (Jaysh al-Thowwar)	1	0.04
Saraya al-Jihad Fi Bilad al-Sham	1	0.04
Sawaid Al-Khayr	1	0.04
Sham Liberation Army	1	0.04
Shamiya Front	9	0.39
Shia Muslim extremists	1	0.04
Southern Front	28	1.22
Syrian Army deserters	1	0.04
Syrian Democratic Forces (SDF)	7	0.31
Syrian Turkmen Brigades	1	0.04
Tajamo Ansar al-Islam	2	0.09
The Mujahadeen Room in Latakia Countr..	1	0.04
Turkestan Islamic Party	2	0.09
Unknown	828	36.17
Women's Protection Units (YPJ)	1	0.04
Wrath of Olives	1	0.04
Yarmouk Martyrs Brigade	2	0.09
Total	**2,289**	**100**

Table 7: Groups Using Suicide Bombing in Syria 2011 – 2018 (N = 363)

Group	Count	Percentage
Afrin Falcons	1	0.28
Ahrar al-Sham	2	0.55
Al-Nusrah Front	73	20.11
Al-Qaida in Iraq	2	0.55
Free Syrian Army	3	0.83
Gathering to Aid the Oppressed	1	0.28
Hay'at Tahrir al-Sham	15	4.13
Islamic Front (Syria)	1	0.28
Islamic State of Iraq and the Levant	206	56.75
Jaysh al-Islam (Syria)	1	0.28
Jund al-Aqsa	1	0.28
Khaled Ibn al-Walid Army	2	0.55
Kurdistan Workers' Party (PKK)	1	0.28
Nur-al-Din al-Zinki Movement	1	0.28
Shamiya Front	1	0.28
Tajamo Ansar al-Islam	1	0.28
Unknown	50	13.77
Women's Protection Units (YPJ)	1	0.28
Total	363	100

Data Analysis: As the above tables show, there have been numerous non-state players in the Syrian civil war, 66 by the GTD's count, but only a small portion of the named and unnamed organizations carried out the vast majority of attacks. Of those groups, only a few dominated. However, it is important to note that nominal organizational changes tend to skew the data. For instance, Al Qaida in Iraq (AQI) became Al-Nusrah Front (AN) in Syria, which then became Hay'at Tahrir al-Sham (HTS).

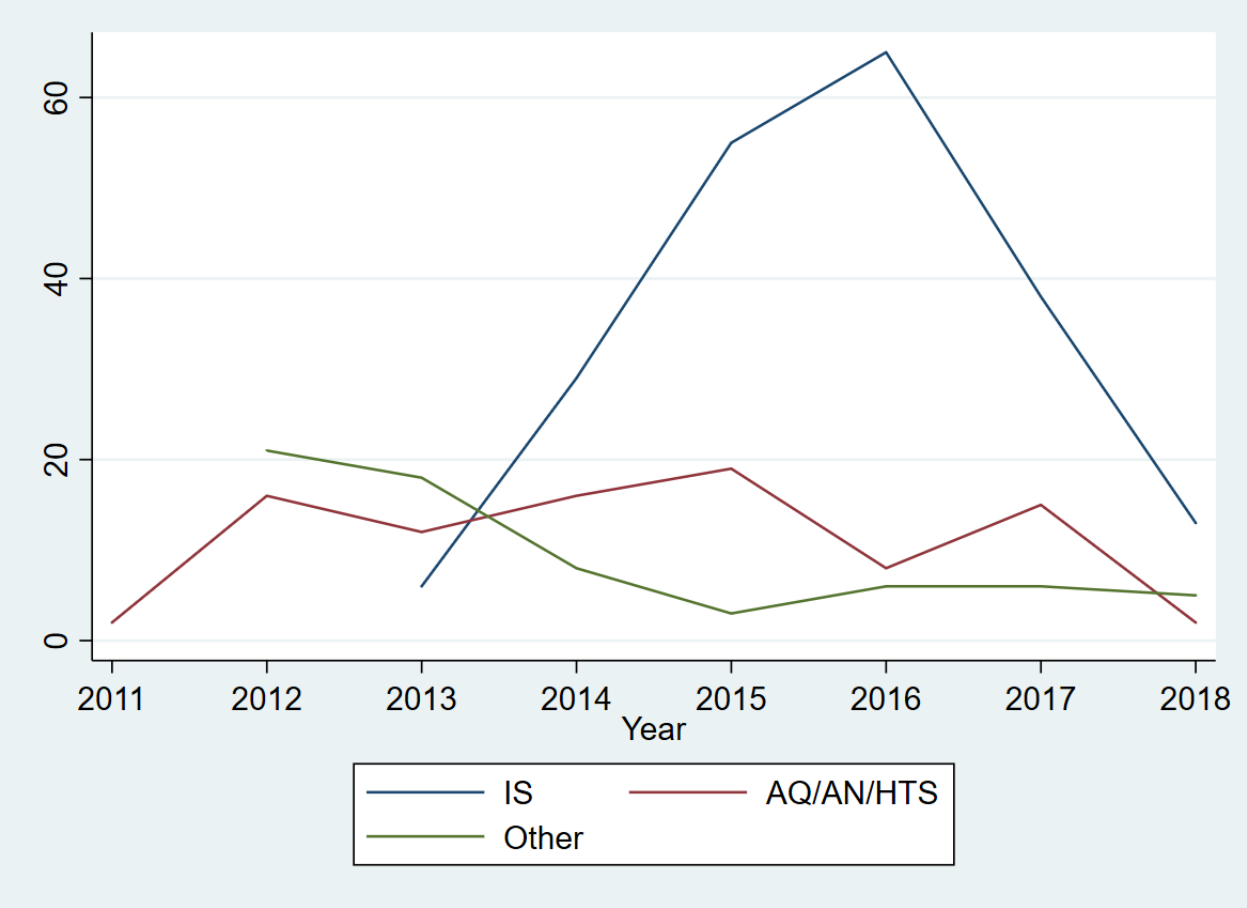
In addition to the unequal distribution of attacks by organization, suicide bombing was used by 27% (18) of them. Even within that cohort only a handful were dominant practitioners. The

below chart demonstrates how the lead organizations carried out suicide bombings over time, but a second graph takes a closer look at target types for each group during the same observation period.

Table 8: Suicide Bombers in Syria 2011 – 2018 (Condensed)

GroupAttack	Count	Percentage
IS	206	56.75
AQ/AN/HTS	90	24.79
Other	67	18.46
Total	363	100

Graph 7: Suicide Bombers in Syria 2011 – 2018 (Condensed; N = 363)



Data Analysis: The above table and graph depict the three main strands of suicide bombing attacks by 2 known and 1 unknown set of entities. It compares the count associated with Islamic State and compares the data against AQ/AN/HTS, as well as the "other" organizations. A glance at the simple annualized graph supports two observations. First, that attacks by "other" entities seemed to diminish as attacks by AQ/AN/HTS and IS rose, especially beginning during the 2013 – 2014 timeframe. Secondly, that the AQ/AN/HTS trend fluctuated over time deserves some explanation.

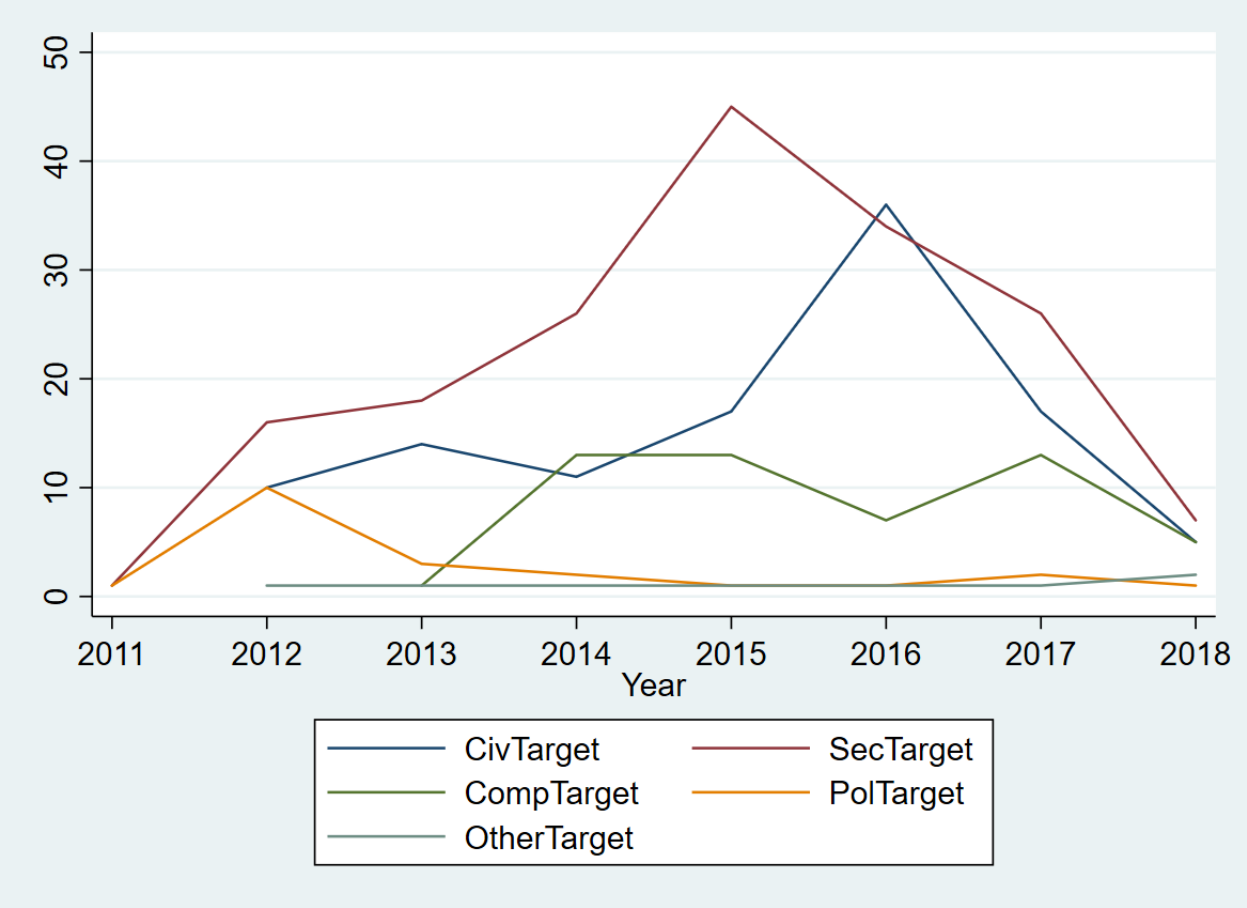
The "other" entities were notable as dominant suicide bombers during 2012, but that number attenuated as AQ/AN/HTS and, especially, IS seemed to supplant them. It seems that the

attribution for suicide bombing was naturally biased toward AQ during 2012 because they were a known entity that could claim the attacks and IS did not yet come into existence in Syria. It is also plausible that coders had reason to believe that *the* premier organization involved in such attacks for the past several years in Iraq should be credited with them in Syria (absent any claims to the contrary). After all, it was AQ(I) that dominated the Islamist insurgent scene, which had historically tended to produce the overwhelming majority of suicide bombing attacks. Indeed, much of the unclaimed attacks were the product of AQ conducting shaping operations for which their announced presence in Syria was not yet ripe (e.g., Lister 2016a).

In terms of accounting for the AQ/AN/HTS trend fluctuation in suicide bombing activity over the duration of the period, it is worth understanding how organizational changes for their targeting preferences changed over time.[3] I'll turn now to the data in order to inspect the micro-level details that will lead to a more meaningful interpretation of the observable variation in macro-level pattern. IS will be dealt with last. First, a glance at the suicide bombing target landscape is in order.

[3] Equally as important is the question of whether suicide bombing targets differed from non-suicide bombing targets for the organization and whether a pattern could be discerned over time.

Graph 8: Suicide Bombing Attacks by Target Type – Syria, 2011 – 2018 (N = 363)



Data Analysis: Suicide bombing targets tended to be mostly security-related until about 2016, in which case security and civilian targeting were rather similar in frequency. Targeting competitors in comparison with targeting both security and civilian targets bore an inverse relationship during 2013, reached near-parity during 2013 – 2015, but returned to the earlier inverse pattern in 2016. Political targets were apparently very prominent during 2012, but declined and never again rose to significance throughout the remainder of the period under consideration.

The glaring question to be asked is why were competitors only important to attack with suicide bombing during certain times, but not others? Analysis of the micro-level data seems to

explain the variance. During 2013, AN attacked a pro-government militia headquarters. During 2014, IS was the main protagonist and had clustered its attacks mostly against the YPG's People's Protection Units (PPU) in Kobani. During 2015 – 2018, IS was, again, aiming the bulk of its energy at the YPG's PPU, as I discuss below. There were two outlier attacks, one of which was carried out by HTS against Ahrar al-Sham and the other in which the Afrin Falcons attacked the Levant Front's headquarters.[4]

Table 9: Aggregated AQ/AN/HTS Suicide Bombing Target Preferences (N = 90)

Target Type	**Count**	**Percentage**
Business	2	2.22
Educational Institution	1	1.11
Government (General)	12	13.33
Military	52	57.78
Police	6	6.67
Private Citizens & Property	13	14.44
Religious Figures/Institutions	1	1.11
Terrorists/Non-State Militia	2	2.22
Transportation	1	1.11
Total	90	100

Table 10: Condensed, Unmodified, AQ/AN/HTS Suicide Bombing Target Preferences (N = 90)

Target Type	**Count**	**Percentage**
Civilian	18	20
Security	58	64.44
Competitor	2	2.22
Political	12	13.33
Total	90	100

[4] Scant information is available about the Afrin Falcons, but a cursory search reveals that sources indicate they are Kurdish Sunni Muslims. Some claim the group is masquerading as YPG non-affiliates carrying out anti-Turkish violence.

Note: The above tables reflect no alterations in data coding, but the below table does account for 14 incidents having been recoded and the following (disaggregated) table indicates which organizational variant of AQ/AN/HTS committed suicide bombing resources to them.[5]

Table 11: Aggregated, Condensed, Modified, AQ/AN/HTS Suicide Bombing Target Preferences (N = 90)

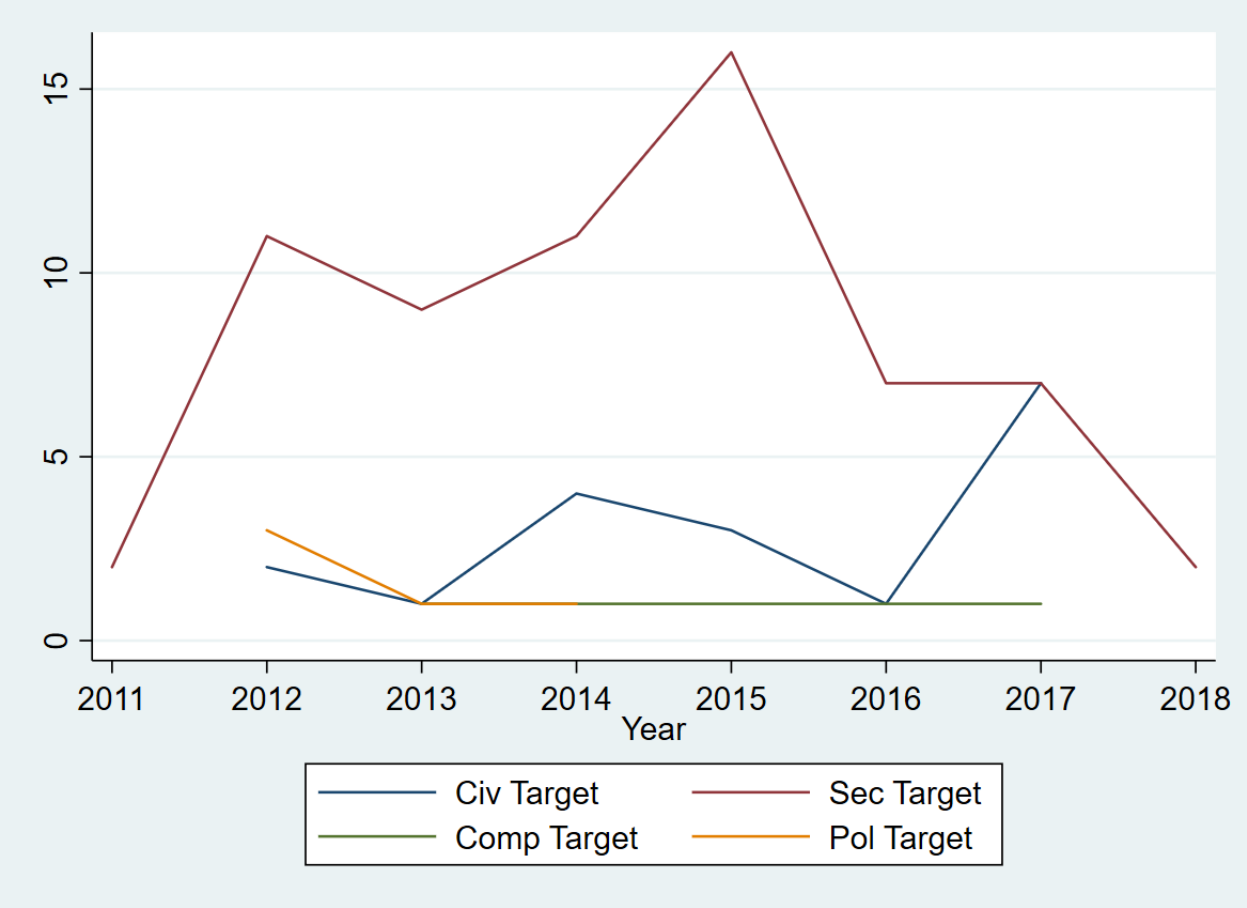
Target Type	**Count**	**Percentage**
Civilian	18	20
Security	65	72.22
Competitor	2	2.22
Political	5	5.56
Total	90	100

Table 12: Disaggregated AQ/AN/HTS Suicide Bombing Target Preferences Among Three Organizational Variants (N = 90)

Target Type	**AQ**	**AN**	**HTS**	**Count**
Civilian	0	12	6	18
Security	2	55	8	65
Competitor	0	1	1	2
Political	0	5	0	5
Total	2	73	15	90

[5] Note that there is no "other" category of targets, as all were able to be placed into four separate categories.

Graph 9: Aggregated AQ/AN/HTS Suicide Bombing Target Preferences Over Time (N = 90)



Data Analysis: The above tables and graph demonstrate that there was a perceptible change in targeting preferences as the single organization underwent two name changes. AQ first launched a twin suicide bombing in Damascus on December 23, 2011, which targeted the regime's intelligence agency and a military barracks. Attacks following that were attributed to AN from January 6, 2012 until January 12, 2017, after which HTS was the named perpetrator.

The GTD data was slightly recoded, where government targets were concerned. Ten were originally sub-coded as being government oriented,[6] however, a deeper look at the notes reveals that such targets consisted of a mix of security establishments (e.g., the Air Force Intelligence Directorate on 3 occasions and the General Security Directorate), as well as non-security offices (e.g., Ministry of the Interior, government offices of various provinces and a Chamber of Commerce). The former were re-coded as "Security-Recoded" and the latter were deemed "Political" targets.

GTD: AN Civilian Targeting

Civilian targeting by AN consisted of 12 incidents that involved several notable events, in which the targets were religiously dissimilar (Shi'a). On September 18, 2015, AN launched two simultaneous massive combined arms assaults against two neighboring Shi'ite villages. According to the GTD, the assault force was joined by Ahrar al Sham and Jund al-Aqsa. It consisted of 9 VBIEDs of which 7 were SVBIEDs, as well as indirect fire munitions (e.g., rockets and mortars) and RPGs. A later attack, joined by Ahrar al-Sham, on Aleppo on July 31, 2016, featured an estimated 5,000 attackers and a multitude of IFVs (Infantry Fighting Vehicles – four of which were either VBIEDs or SVBIEDs), tanks, indirect fire munitions and small arms.[7] Thus, while attacks against security targets did dominate, especially in 2015, the will to allocate precious resources toward terrorist actions (civilian-centric targeting) was observable.

[6] The target sub-type was attacked only between March, 2012 and October, 2014 and was originally coded as either "Government (Diplomatic)" or "Government (General)."
[7] This was an event in which a Russian transport helicopter is said to have been brought down.

GTD – AN Security Targeting (Military and Police)

During the 5 years that AN was coded as having carried out 73 suicide bombings, the majority (55) appear to have been aimed at security targets. Of those, 21 were aimed at military checkpoints and 23 targeted bases, camps, or headquarters buildings. This breakdown suggests that their attacks against military targets exhibited a general bias toward stationary elements. In the case of attacks against checkpoints, they were clustered between September 2014 and April, 2015, and were largely indicated by the GTD data as "multiple" attacks on the same date against specific points. Moving military targets were also attacked. For instance, 11 incidents were carried out against military personnel, including an attack on the General in charge of the Munitions and Supply Division. One of the larger attacks was a combined arms, multi-organizational, assault on an Iranian force.

Attacks on police were comparatively rare (n = 5) and the available data is insufficient to discern any particular pattern. Two of the events were a mixture of civilian and security targeting preferences. For instance, one was an attack on a police bus and another on a mosque attended by officers. Another attack was carried out against a prison.

One interpretation of the GTD data, is that suicide bomb targeting by AN consisted of a bias toward more "legitimate" insurgent warfare, but it did often occur in places where a reasonable person should expect civilians to be killed or wounded. That is, *they seemed to have wanted to beat the incumbents in combat, but didn't mind killing civilians if it served their wider aims*. Under the organization's AN branding, there was only one attack on a competitor organization, but it turns out to have been

a pro-government militia headquarters and not what one might refer to as an "outbidding" attack for battlespace supremacy against an entity that sought to overthrow the regime.[8]

GTD: HTS Targeting

Under the HTS brand, for which 15 suicide bombings were carried out, their behavior doesn't seem to indicate a proclivity for civilian versus security targets, but rather a generally equal distribution. However, their first three suicide bombings were clustered on the same day and were against civilians. The attacks were combined arms assaults, featuring a multitude of indirect munitions, the most notable of which were the homemade Jahannam ("hell") cannons.[9]

An interesting trend was observed, in that a full two-thirds of HTS's suicide bombing attacks occurred in the span of two months (February and March) during 2017.[10] After that, they seemed to attack a competitor once (Ahrar al-Sham) and then moved on to hit 4 security targets. *By February, 2018, no more HTS suicide bombing attacks were logged by the GTD's coders for the year.*[11] The logical questions, perhaps beyond the scope of this paper, would concern why they discontinued the practice. Was it to avoid tarnishing the brand? Had a top-down order to cease and desist been issued? Did they simply run out of bombers? Had they sought other means to achieve their aims?

[8] The same cannot be said of IS, as will be discussed below.
[9] This sort of indigenous brand of indirect fire weaponry is mainly devoid of any guidance system and tends to be used in a rather reckless manner.
[10] One of the attacks was coded as a security target, but was aimed at Shi'ite pilgrims. The GTD noted that, "Hay'at Tahrir al-Sham claimed responsibility for the incident and stated that the attack on Shia Pilgrims was intended to send a message to Iran and its allied groups."
[11] Looking at ACLED data, even after I made a number of modifications and enhanced the coding parameters, I found that only one HTS attack occurred after March, 2018. It was attributed to the HTS Special Forces group "Red Headbands" unit and occurred on November 9th.

GTD - AQ/AN/HTS Data Summary

A reasonable conclusion one might draw from analyzing the data is that AQ had re-branded quickly enough to announce its presence and fade into the dust that would eventually result from an organizational split. This enabled al Qa'ida itself to be at least nominally detached. The AN phase consisted of a clear security-centric focus, but the group did not shy away from inflicting civilian casualties with its suicide bombing efforts. The HTS phase is a little more interesting, for reasons outlined above, but also because the following analysis of the ACLED data enables one to draw somewhat different conclusions.[12] However, to keep this portion of the analysis focused on GTD data, and only on suicide bombing attacks, I will next analyze Islamic State's activities in the Syrian battlespace.

Table 13: Islamic State Suicide Bombing Versus Non-Suicide Bombing Preferences in Syria 2013 – 2018 (Condensed)

Suicide/Non-Suicide	Civilian Targets	Security Targets	Political Targets	Competitor Targets	Other Targets
Non-Suicide	277	125	3	52	3
Suicide	65	88	4	47	2
Grand Total	**342**	**213**	**7**	**99**	**5**

Data Analysis: The above descriptive table indicates that although IS tended to attack more civilian targets than they did security targets (at a ratio exceeding 2:1), they were more prone to commit suicide bombing resources toward the latter by a margin of about 35% (when comparing the two types). What is also interesting to note is the propensity to attack competitor groups with suicide bombing nearly half the time they attacked them in total. The significance of this data lay in the

[12] A glance ahead to the unfinished 2019 data informs the analyst that HTS did not fully exit the suicide bombing business.

observation that although terrorism (civilian targeting) was of great importance to the group, it leaned heavily toward guerrilla warfare (security and competitor targeting) when using suicide bombing.

The above analysis highlights what some might view as a paradox. Namely, the *terrorist* group was using suicide bombing as a tool of *insurgency*. This might account for why some tend view the organization as appearing to be more of an army than would naturally be expected of a "terrorist" entity that carries out atrocities, such as mass beheadings, genocide, and ethnic cleansing. They also committed these inexcusable acts of terror against civilians, which are well known in both Syria and Iraq.

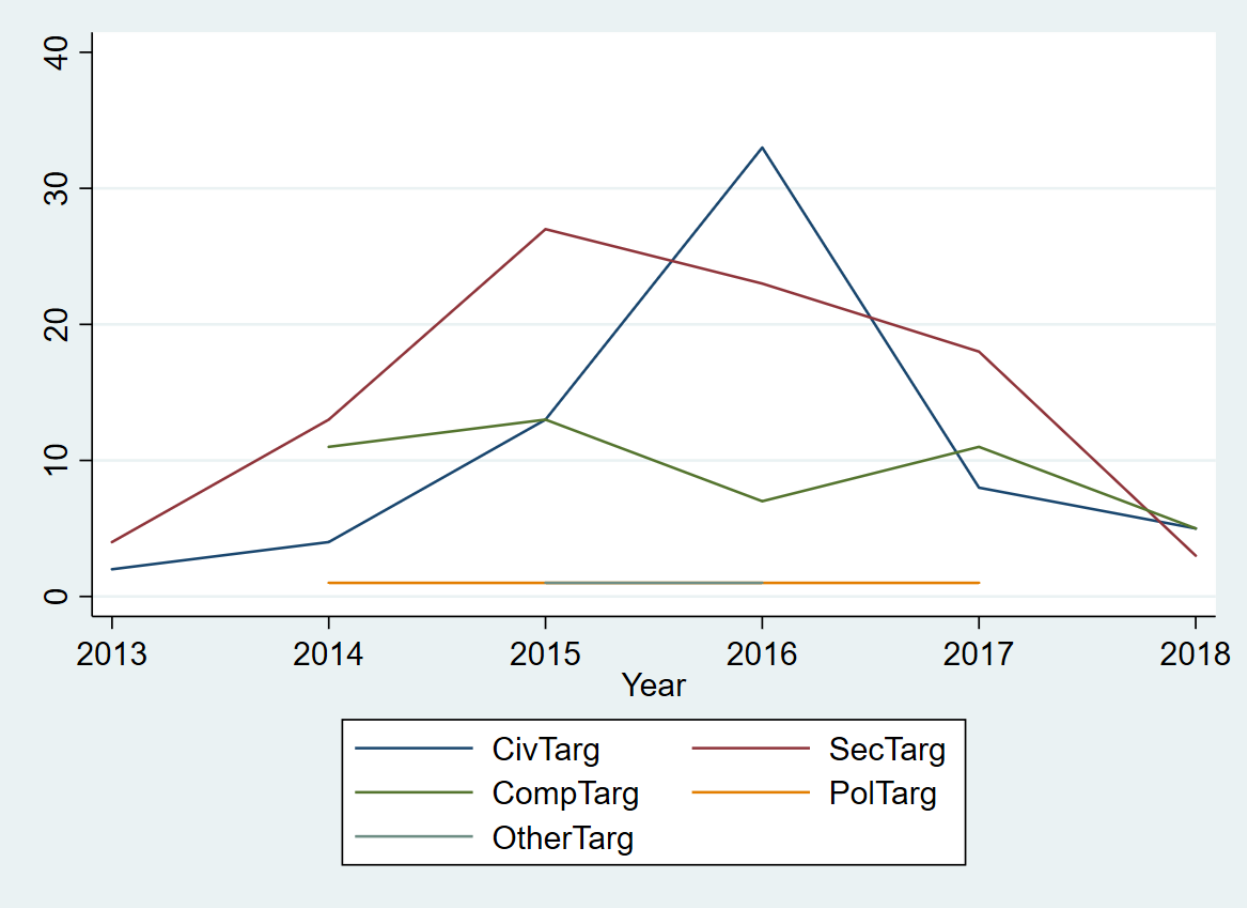
I must momentarily digress from the data analysis to clearly state my position that there is no reason to exclude from an organization the "terrorist" adjective just because they tended to use suicide bombing, or any other violent means, to achieve insurgent objectives. The GTD captured plenty of terrorism incidents and there was much more beyond a mere attack tally that indicates the perpetrators violated the basic human rights of the most innocent women, children and elderly, let alone combatants. Still, the data reveal a suicide bombing strategy that was mainly focused on reducing the capacity of armed competitors; whether state security forces or non-state violent actors.

Table 14: Islamic State Suicide Bombing Preferences in Syria 2013 – 2018 (N = 206) Re-Coded

Target Type	**Count**	**Percentage**
Business	15	7.28
Competitor - recoded	1	0.49
Government (General)	4	1.94
Journalists & Media	1	0.49
Military	71	34.47
NGO	1	0.49
Police	17	8.25
Private Citizens & Property	40	19.42
Private Citizens & Property - recoded	1	0.49
Religious Figures/Institutions	3	1.46
Terrorists/Non-State Militia	46	22.33
Transportation	2	0.97
Unknown*	2	0.97
Utilities	2	0.97
Total	206	100

Note: Only two events were re-coded from the "unknown" category and two remained.

Graph 10: Islamic State Suicide Bombing Preferences in Syria 2013 – 2018 (N = 206)



Data Analysis: More than half of the suicide bombings in Syria were claimed by, or attributed to, Islamic State. The group was not properly named until their official split from AQ in 2013, so comparable 2011 and 2012 data does not exist for Syria. What makes this project rather complex is that IS was heavily involved in two cross-national insurgencies, mostly simultaneously. This makes the Syria data incomplete in terms of analyzing the group itself. Therefore, what could be gleaned from analyzing their actions in Syria will be highlighted here, but supplemented by the next chapter's consideration of the Iraq theater of operations.

GTD: IS Civilian Targeting

IS targeting of civilians with suicide bombings were recorded by the GTD to have occurred 64 times (65 in my re-coded version of the data). The first attack occurred on July 1, 2013, against a museum and cultural center. The device used was an SVBIED, but what stands out is that "two drivers" were recorded as having operated the vehicle. Either the group had plenty of personnel to spare, or it was very important to ensure that if one driver was disabled the other would carry on with the mission. Both might be true, but what seems apparent is that IS was making a statement, intentionally or not, about its commitment to the Syrian battlespace.[13] There was only one more (attempted, but failed) suicide bombing against civilians by IS in Syria for the rest of the year.

The organization seemed to continue a trend by which suicide bombing increased over the course of 2014 and 2015 in Syria, but security targets appeared to have always taken precedence. During that time, however, civilian targets were attacked only 4 times in 2014, but quadrupled to 13 in 2015. In 2014, they attacked a hotel, the Syrian Red Crescent,[14] the Kurdish Democratic Union Party and launched a combined arms, mass casualty attack on an oil and gas field. That last attack produced approximately 310 deaths (including 40 attackers).

[13] In another instance of inter-database differences, CPOST claims this event was a truck bomb attack on regime soldiers. It also cites two separate attacks, which indicates two bombers carried out the attack. Even though the details differ from the GTD, it seems two members of the group were being dedicated to exploding themselves at the same target.

[14] An interesting point to note is that of the 7 attacks on NGOs, only one of them was a suicide bombing incident. The victim party in that case was the Syrian Red Crescent. The other targets, which were attacked, but not by suicide bombers, were ACTED, DRC, Doctors without Borders, SERA, ICRC and One Nation. That is, *only* a clearly Sunni Arab organization was hit by fellow Sunni Arabs with a suicide bombing. This provides even more evidence that the tactic was not merely reserved for foreign "invaders" of a different religion, but for those who most resembled the attackers.

During 2015, IS attacked religious ceremonies, a mosque, municipal centers, a marketplace and a power plant. What is interesting for this year is that for suicide bombing events prior to December, 2 out of 7 were part of multiple events and only 3 of them were claimed by IS. However, IS exhibited an end-loading pattern of behavior, in that almost half (6) had occurred in December, for which *all* were multiple events and *all* were claimed by the organization. This signifies an enhanced capacity to conduct combined arms attacks and a boldness of will in taking responsibility for them.

Another interesting pattern could be discerned from an analysis of the change from 2014 to 2015. IS began to pair attacks by locale. That is, during 2013 and 2014, suicide bombing attacks were occurring at various locations, with no apparent concentration of efforts. During 2015, however, they began to allocate their resources to municipalities in bands of two or more attacks. A similar clustering pattern could be observed in 2016 as well. What this might mean is that their leadership decisions were either becoming more "sophisticated" (as Bunker and Sullivan 2004 would term linked suicide bombings), or that local commanders were given more resources for suicide bombing and chose to use them according to the needs that they saw fit for their unique AO.

All but one of the 2016 suicide bombing attacks against civilians by IS were claimed and 66% (23 of 35) of them were part of a multiple attack effort. Sub-target types were rather disparate, but it should be noted that an attack on a Shi'a shrine in Sayyida Zaynab was repeated three times that year. It was, in fact, a repetition of an earlier described 2008 AQ attack.[15] It is telling that such

[15] Two explosive-laden belts were used on January 21, an SVBIED and multiple explosive-laden vests were used on January 31 and on June 11 both vests and an SVBIED were used.

efforts to attack a Shi'a shrine were made. The pattern reveals an intense desire to make sure that non-recyclable human resources were dedicated to the task of provoking or emphasizing the sectarian nature of the war.[16] Terrorism in this case appeared to have mattered a great deal.

As suicide bombing attacks against civilians by IS tapered off in Syria during the 2017 – 2018 period, during 2017, 3 out of 8 were directed at refugees or internally displaced persons. In 2018, the incidents were always carried out with a combined arms approach, but were confined to two specific areas. One occurred during a surprise attack on an area of Deir ez-Zor, which the group had recently lost and sought to recover, and it featured 10 suicide bombers.[17] The next several attacks were concentrated within a single day on As Suwayda and were carried out as part of nearly a dozen other attacks, for which suicide bombing merely served as a spearhead for a multipronged effort.

GTD: IS Security Targeting

Suicide bombing attacks against security targets by IS were mainly against military objectives (71) and occasionally aimed at police forces (17). However, of the attacks on police, it was rare that Syrian police were attacked by IS with suicide bombers. Rather, IS focused once on Turkish and several times on Kurdish (Asayish) police. In the former attack, Turkish police were stationed in the

[16] There are other reasons to have gone to such great lengths to attack an important Shi'a target, such as to punish Iran, punish the sect from which the regime's Alawite branch was derived and to which it is most closely related, or to exhibit dominion over the Shi'ite population. Yet, the IS approach is rooted in Zarqawi's sectarianism targeting procedures, so it does make sense that they would continue to gain Sunni recruitment by stoking Shi'a anger (e.g., see Fishman 2016 for a detailed explanation).

[17] Suicide bombing attacks do not necessarily consist of a single bomber. There are many events for which multiple suicide bombers are used. It is difficult to actually calculate the number of total suicide bombing attackers, since the GTD records "nperps" as the number of perpetrators, but also will list that number as "-99," meaning indeterminate, if they are unable to certify a precise number. Many times the "notes" column indicates the perceived number of bombers, by quantification is still extremely difficult.

vicinity of the border and were targeted during the November 29, 2014, Kobani offensive. In the latter cases, a twin bombing was aimed at Kurdish Asayish police, but it was also noted that YPG elements were the victims; in other words, competitors per se.

There were five attacks on Kurdish police buildings, one on a checkpoint and one on Kurdish reporters during 2017 (that appears to have included police personnel). Most attacks on Kurdish police were confined to 2014 and 2015, with one in 2016 and 2017 (just mentioned). SVBIEDs were the chosen delivery method (8 out of 9 times).

No suicide attacks were directed at Syrian police forces until 2015 and they ceased after 2017 (n = 6); they were evenly distributed against mobile and stationary personnel. One event stood out, which was an attack on al-Adhath Prison on June 3, 2015, that featured five SVBIEDs. This informs the analyst that the hardest of police targets received the most lethal/suicidal effort.[18] All suicide bombing attacks on police personnel or structures were successful during the time in which IS used them (2014 – 2017). This is indicative of command decisions that were carefully planned and appropriately resourced, from the perspective of the combatants.

IS targeted military forces with suicide bombs on 71 occasions between August, 2013, and August, 2018. The aggregate sum is somewhat skewed for two reasons. First, the majority of the attacks occurred during 2015 and 2016 (21 each year). Secondly, a particularly clustered event would

[18] That a prison is denoted as a police target is in line with the American notion of police and corrections both representing the broader law enforcement community.

impact a macro-level analysis, so that the bell-curve normally found in an equally distributed set of circumstances would be somewhat lopsided. Sometimes, a single event would feature a multitude of suicide bombers, which the database would note, but not quantify in a way that is useful for analysis.[19]

Many suicide bombing events tended to cluster by two or three co-located attack sequences, but a January 16, 2016, attack was exceptional in that 8 suicide bombing events were logged in the GTD for the Deir ez-Zour region.[20] A glance at the municipalities in which attacks were occurring makes it somewhat obvious that attacks were spread in different directions, but tended for about two months at a time to be concentrated in a particular area (e.g., Hasakah in May & June, 2015; Deir ez-Zour in January, 2016; Bab from November, 2016 to February, 2017). The pattern could be interpreted to mean that high-value security targets received some unique resources.

IS suicide attacks on security targets exhibited a proclivity toward military, as opposed to police, targets. Military targets tended to be clustered on several occasions, which hints that suicide bombing attacks were not random, but concentrated against a well-armed rival. This would be an example of the practice being used as a force multiplier against hardened targets, with the aim of winning a battle, or at least exacting costs on the enemy for one's own loss. When they attacked the "police" it was not typically the regime's law enforcement personnel, but mainly Kurdish forces.

[19] Examples of this would be where the event was logged as a singular incident, but the "weapdetail" column would indicate there were 5 SVBIEDs used on April 5, 2016 in Dumayr and 5 SVBIEDs as well as 5 body-worn IEDs on August 9, 2017 in Homs. Even in those cases, the number of perpetrators ("nperps") is recorded as "-99" which translates as unknown. The GTD counts these activities as separate attacks, which is why I note that the macro-level analysis would be skewed.

[20] Neither CPOST nor SAND, however, recorded this event. ACLED is not configured for coverage of 2016.

However, the fact that regime police were only attacked between 2015 and 2017 seems to indicate that territorial control factors were important. That is, IS attacked Syrian police where they were exercising authority, but when territory changed hands and Kurdish police held dominion over a particular locale, *they* were targeted with suicide bombs.

GTD: IS Competitor Targeting

Suicide bombing attacks against competitors by IS began in January, 2014, and continued through December, 2018. An interesting question to answer is who were the competitors? That is, what did they represent? I constructed the below table as a means to answer that question.

Table 15: IS Competitor Targeting in Syria, 2014 – 2018 (N = 46).

Group Targeted by IS	**Affiliation**	**Count**
Ahrar al-Sham	Arab, Sunni, jihadist	2
Al-Nusrah Front; Jabha al-Shamiya; Jaish al-Mujahideen	Mainly Arab, Sunni, jihadist; Arab, Sunni, jihadist; Arab, Sunni jihadist	1
Free Syrian Army (FSA)	Mainly Arab, Sunni, jihadist/secularist	3
Hay'at Tahrir Al-Sham (HTS)	Arab, Sunni, jihadist	1
Jaysh al-Quds	Unknown, but likely Arab, Sunni, jihadist	1
Liwa Abu al-Fadl al-Abbas	Arab, Shi'a, pro-regime	1
Liwa al-Tahid	Arab, Sunni, jihadist	1
Osoud al Sharqiya	Arab, Sunni, non-jihadist	1
People's Protection Units (YPG)	Kurdish, Sunni, mainly non-jihadist	24
Syrian Democratic Forces (SDF)	Mainly Kurdish, Sunni (dominant), mainly non-jihadist	9
Unknown	Unknown	2
Grand Total		**46**

The observer can readily see that the overwhelming majority of suicide bombing attacks against competitors in Syria were directed at the YPG and SDF. This disparate attack distribution might be related to the size of those forces, but was not *solely because* they were dominated by ethnically dissimilar Kurds. There was some clustering by location in that 7 of the 11 attacks in 2014 were carried out in Kobani.[21] The remaining groups against which suicide bombings were carried out did not appear to be democratic occupiers/interveners, or of a different religion (or sect), excluding Liwa Abu al-Fadl al-Abbas.[22] In parallel with the above security-related targets, IS seemed to have used its finite human-explosive resources in a manner consistent with the exercise of battlefield dominance.[23]

GTD: "Other" Targeting

Although I have created a target category called "other," a deeper look at the available details reveals that a couple attacks were simply disrupted attacks (foiled, or premature detonations), while three were re-coded. The rest were derived from what the GTD classified as "unknown" target types. No particular pattern was discernible for this target subset.

Cut Two: ACLED Data

ACLED data had its own unique complications, which I discuss elsewhere. Despite the database's quantitative comparative advantage in terms of the number of observations it considers, it became

[21] Indeed, when looking at Kobani specifically, there were 15 logged suicide bombing attacks on that small city during Fall/Winter, 2014 (12 attacks) and Summer, 2015 (3 attacks), 8 of which were against competitors.
[22] The exception is that two targets were coded as "unknown" by the GTD, one of which was named as a "rebel group" (likely Sunni Arabs) and the other was described as "militia members." Also, there is an attack that shows up as "Competitor – recoded," which is justified by the fact that four suicide bombers were hiding in a truck carrying water tanks. When stopped at an FSA checkpoint, three of the four were killed prior to detonation, but the fourth managed to detonate. It is therefore clear that in the instant case, the will and means to use suicide bombs against a competitor group was present, despite whether they were the ultimate intended target.
[23] Whether this was to wear down the enemy's will, reduce its offensive force projection capacity, compel it to go on the defensive, redirect its efforts so as to generate force dispersal, or some other tactical/operational aim, remains to be discovered.

clear that its usefulness was greatly enhanced as I pushed past its limitations and turned the notes into a source for further coding. After a great deal of additional coding, I was able to generate more variables for consideration. The result is that ACLED lists the number of suicide bombings in Syria between 2017 and 2018 as consisting of 249 events, in contrast with the GTD's count of 79 during the same period. With some additional work, however, I was able to determine that number to have been 287.[24]

Table 16: ACLED Data - Coding Suicide Bombing Targets by Battlefield Conditions

Target Type/Sub-Event Type	**Armed Clash**	**Government Regains Territory**	**Non-state Actor Overtakes Territory**	**Suicide Bomb (as coded by ACLED)**	**Total**
Unknown (coded -99)	2	0	0	3	5
Foreign military	4	0	0	4	1
Foreign militia	1	0	0	0	1
Civilians	5	0	0	13	18
Competitor(s)	67	0	8	53	128
Competitor(s) with Foreign Military Support	2	0	1	1	4
Security	56	8	10	45	119
Security & Civilian	0	0	0	4	4
Total	**137**	**8**	**19**	**123**	**287**

Note: the columns were derived directly from ACLED, but I created the rows from the embedded narratives.

[24] There were actually 290 events. Three of those events included 2 instances for sub-event type "Air/drone strike" and 1 for "Remote explosive/landmine/IED." The two air-related encounters appeared to have been events in which ground targets were interdicted in Hajin. Three SVBIEDs were struck in the first event and a possible SVBIED (truck) was hit in the second. The third case, having occurred in Tweini, is less clear. The narrative in the notes section contains language that makes it uncertain if the attack was a suicide bombing, such that it says, "Members of JTW detonated explosives at Tweini bridge in northern Hama countryside which connects opposition-held Tweini with regime-held al-Hurra. Conflicting reporting as to whether the bridge was destroyed." This sort of confusing language is not uncommon within the database. Since it lacks clarity, and since the GTD indicates it was not a suicide bombing, it is being excluded from consideration.

Table 17: ACLED Data - Coding Suicide Bombing Targets by Battlefield Data & Disaggregated Battlefield Conditions

Target Type/Sub-Event Type	Armed clash	Government regains territory	Non-state actor overtakes territory	Suicide bomb (ACLED Coding)	Grand Total
civ	5			14	19
comp/foreign mil direct	7		1	3	11
comp/foreign mil standoff	20		2	1	23
comp/foreign mil standoff & direct	4		1		5
competitor	38		5	51	94
foreign mil direct	4			4	8
foreign mil standoff				1	1
foreign militia standoff & direct	1				1
sec	45	5	8	43	101
sec/civ				4	4
sec/foreign mil direct	1			2	3
sec/foreign mil standoff	8	1			9
sec/foreign mil standoff & direct	3	2	2		7
Unknown	1				1
Grand Total	**137**	**8**	**19**	**123**	**287**

Note: The columns were derived directly from ACLED data, but I created the rows by going a step further in my disaggregation process, which was derived from embedded narratives.

Data Analysis: The above table indicates that for suicide bombing attacks in Syria, during 2017 – 2018, a few findings emerge more clearly. First, they tended to be carried out mainly against competitors (46%) and security targets (43%). This total, a combined 89%, indicates a strong bias in allocating suicide bombing resources toward entities that would be most likely to pose a physical threat to the attackers. Thus, it seems the more hardened (armed or armored) the targets, the more suicide bombing was used in attacking them.[25]

[25] This is consistent with Winter's observation (2017a: 13) that there is… "a strong correlation between the use of suicide attacks and the intensity of the military threat faced by IS."

The significance of this finding is that when it is taken into consideration alongside the above GTD data analysis, a partial corroboration appears. That is, the GTD data supports the conclusion that the most prolific practitioners of suicide bombing exercised a strong bias toward similarly threatening targets. For instance, the GTD indicates that AQ/AN/HTS tended to attack security targets 72% of the time, in comparison with other target sets. The organizational triumvirate did not, however, allocate similar resources to competitors, which is a non-finding[26] worth revisiting for a separate analytical quest. According to the GTD, between 2011 and 2018, IS tended to prioritize suicide bombing against security targets first (43%), civilians second (32%) and competitors third (23%).

A second finding, based on the above, is that where ACLED indicated a territorial transfer took place (either for the government or for a non-state actor), the proportion of suicide attacks on security targets was 18:124, or 15%. For competitors, it was 9:133, or 7%. This appears to indicate that attacks against the two types of physically threatening entities were not done for reasons of battle desperation (headed for a territorial loss or seeking to surmount an adversary's overwhelming territorial defenses). Rather, it appears to be mainly a key combat technique ("armed clashes" as coded by ACLED), or an ambush-style ("suicide bomb" as coded by ACLED) measure. Either way, one could conclude that it was a force-on-force means of accomplishing a security-related objective.

[26] I call this a "non-finding" in the sense that the data do not support a conclusive assertion about what it meant to attack so few competitors with suicide bombing. The question that seems to emerge here is why didn't AQ/AN/HTS use suicide bombing in attacks on competitors? Put differently, the correlation coefficient would be expected to be negatively signed for this target set and therefore represents an actual finding with an inverse relationship to explain. For now, I'm more interested in analyzing what kinetic actions did take place, not so much the ones that did not.

A third finding, related to the second, is that it seemed to matter only marginally whether foreign support was provided when a suicide bombing was being allocated to a target. For instance, of the 133 suicide attacks on competitors, 8% were against competitors who had direct foreign military support, 17% for those who had standoff foreign military support, 4% against those who had both direct and standoff foreign military support and 71% against competitors for whom ACLED did not mention any foreign, direct or standoff, military support.

Of the 124 suicide bombings against security targets, 2% were against those that had direct foreign military support, 7% against those that had standoff foreign military support, 6% against those that had both and 81% against security targets for whom ACLED did not mention any foreign direct or standoff military support. *This is evidence that foreign military support, whether standoff or direct, played little role in the decision to use suicide bombing against a target*. I emphasize this point, as it will later form the basis of a theoretical test.

A fourth finding, is that civilians were not part of the equation in offensive operations (armed clashes), although they were attacked mainly as stand-alone events 5% of the time. This would indicate a focus on inciting a civilian population when it was suitable to one's aims, but mostly maintaining a competitive stance with regard to sovereignty-relevant, or physical security-seeking, challengers.

Table 18: Suicide Bombing Attackers, Disaggregated by Groups, in Syria (N = 287)

Attacker	**Count**
HTS	34
IS	206
Jund al Aqsa	1
Khalid ibn al Walid	6
Liwa al Aqsa	1
TIP	1
Union of Mount Hermon/Jaysh Mohammad Operations Romo	1
Unknown	36
YPJ	1
Grand Total	**287**

Data Analysis: An initial observation of the above table makes it clear that the two named entities carrying out suicide bombing were IS (72%) and HTS (12%).[27] These descriptive statistics ignore alliances, such as that between Jund al Aqsa, Liwa al Aqsa and TIP (Turkistan Islamic Party) with HTS, or Khalid ibn al Walid with IS. As would be expected, "unknown" attackers occupy a substantial space in the data (13%). The next question to be asked centers on their behavioral profiles. That is, who were they attacking, to what extent and under what conditions were they doing it?

[27] Given that the period ACLED covers in Syria is much later in the civil war, HTS is the entity for whom they coded the post-AQ and post-AN organizational variant.

Inferential Statistical Analysis of ACLED Data

Table 19: Pearson's Correlation Coefficient for PCT, Number of Bombers, Combined Arms and Vehicular

Variable	Mean	Std. Dev.	Min	Max
PCT	1.894737	1.196889	0	6
Number of Bombers	1.354386	1.092882	0	10
Combined Arms	0.6	0.4907597	0	1
Vehicular	0.5333333	0.4997652	0	1

	PCT	Number of Bombers	Combined Arms (Y/N)	Vehicular (Y/N)
PCT	1			
Number of Bombers	0.1794	1		
Combined Arms (Y/N)	0.2997	0.239	1	
Vehicular (Y/N)	0.0706	-0.1216	-0.1321	1

Data Analysis: PCT and Number of Bombers are interval variables, where PCT consists of 7 possible values (Min = 0 – Max = 6) and Number of Bombers 11 possible values (Min = 0 – Max = 10), with a range of measurement being -1 to 1. Combined Arms and Vehicular are dichotomous variables, where they each have 2 possible values (Min = 0 and Max = 1) and have a range of measurement between 0 and 1.

The first table indicates the means and standard deviations for each of the variables. The mean is subject to a slightly different interpretation for the two types of variables. For PCT, we see that where suicide bombing is used against a threat, the average (mean) threat being posed by the attacked party is 1.89. This can be interpreted to indicate that competitors and a substantial portion of security elements tended to be targeted by suicide bombers. The mean for Number of Bombers is

1.35, which indicates that more than one bomber is allocated to each attack. This is slightly misleading because there was an outlier that consisted of 10 attackers and a few consisted of 0, given the coding rule I established (above). Therefore, the median, which is 1, represents a more accurate gauge; there were about 388 suicide bombers for 287 attacks. The mean scores for Combined Arms is that it was used 60% of the time, whereas for Vehicular it was 53%.

The standard deviations for the dichotomous variables are nearly useless, given their binary values. However, the standard deviations for the interval variables indicate that variations tended to cluster fairly tightly around the mean (again, see my remarks on the mean versus median). Looking at the correlation coefficients, the following hypothesis tests can be reported:

Ha(1): We can reject the null hypothesis that there is no relationship between the PCT value and the number of suicide bombers that attacked the target, in which case we can accept the alternative hypothesis. Although the relationship ($r = .1794$) is positive, the significance is small. This finding would indicate that the threat value of a potential target for suicide bombing might be a factor for insurgents' considering whether to attack or save their resources for a more worthy target.

Ha(2): We can reject the null hypothesis that there is no relationship between the PCT value and whether combined arms were used in a suicide bombing attack, while accepting the alternative hypothesis. The relationship is positively signed ($r = .2997$) and its significance verges on medium. Of all the hypotheses, this one exhibits the greatest strength. This finding could be interpreted to

mean that sophisticated coordination accompanies suicide bombing attacks, given the threat posed by the actor in question.

Ha(3): We cannot reject the null hypothesis that there is no relationship between the PCT value and whether a vehicle was used in a suicide bombing attack. The relationship is positively signed ($r = .0706$), but its significance is insufficient. This finding would indicate that the degree of threat posed by an entity targeted for a suicide bomb attack is not relevant for considering whether vehicles were used. One explanation might be that the absence of correlation might be an artifact of the data being aggregated at an unnecessarily high level. A more micro-level approach, which considers various groups' behaviors, might reveal some nuances.

Ha(4): We can reject the null hypothesis that there is no relationship between the use of combined arms and the number of suicide bombers attacking a target ($r = .239$). We can accept the alternative hypothesis, which is positively signed, but for which its significance is small. This finding seems to imply that there is at least some propensity to enhance a sophisticated coordination attack (combined arms) with a force multiplicative effort (more suicide bombers).

Ha(5): We can reject the null hypothesis that there is no relationship between the number of suicide bombers and the use of vehicles. We can accept the alternative hypothesis, which is negatively signed ($r = -.1216$), but for which its significance is small. This finding indicates that as the number of suicide bombers increased, the propensity for vehicles to be involved decreased, but not in a significant way.

Ha(6): We can reject the null hypothesis that there is no relationship between the use of vehicles and whether a combined arms assault was used for a suicide bombing attack. We can accept the alternative hypothesis, which is negatively signed (r = -.1321) and for which its significance is small. This finding indicates that where a combined arms assault was used for a suicide bombing attack, the propensity for vehicles to be involved decreased, but not in a significant way.

Table 20: Attackers Sorted by PCT Rating (0 – 6)

Attacker by PCT Rating (0 - 6)	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**Grand Total**
HTS		2	29		3			34
IS	7	78	65	35	9	5	7	206
Jund al Aqsa		1						1
Khalid ibn al Walid		2	4					6
Liwa al Aqsa		1						1
TIP			1					1
Union of Mount Hermon/Jaysh Mohammad Operations Romo			1					1
Unknown	13	10	13					36
YPJ			1					1
Grand Total	**20**	**94**	**114**	**35**	**12**	**5**	**7**	**287**

Data Analysis: The above table indicates that most suicide bombing attacks tended to be used against PCT 2, followed by 1 and then 3. However, a closer look reveals something more interesting. HTS was mostly attacking security targets, 85% of the time. They extended this to security targets with foreign standoff or direct support 9% of the time and only against competitors (with no foreign support) 6% of the time. They also exhibited a limited penchant for attacking competitors and did not direct their efforts at IS.[28] This indicates that HTS directed its suicide bombers toward regime-related targets and forwent those that were operating at a threshold below the state.

[28] The two cases recorded by ACLED in which HTS used suicide bombing against competitors were against Hezbollah and an unconfirmed report of an attack on HNDZ (Nour al-din al-Zenki) fighters. The former are Shi'a and the latter

There appears to be evidence that speaks of a strategy by HTS, which ignores the least and the most threatening elements and focuses on the more practical targets that would enable them to make gains that don't alienate the population, nor upend their strongest jihadist competitors.[29] In short, with regard to their use of suicide bombing, they seemed on the whole to have worked toward a goal of legitimacy through insurgent warfare, but not by means of terrorism per se.

In contrast, IS was attacking competitors 38% of the time, but when considered alongside attacks on competitors that had foreign (standoff, direct, or both) support, the share jumped to 57%. Security targets were attacked 32% of the time, but when considered alongside those who were supported by foreign forces (standoff, direct, or both), the share was closer to 39%. Although IS attacked across the entire spectrum of targets, they did so with an emphasis on those who presented a physical threat to their security, especially competitors. This sort of behavior can be interpreted to mean that *IS was willing to allocate its single-use resources mainly to take out the competition, so as to assert or maintain dominance in the battlespace.*

Sunni, Muslims. The latter case is of some interest, as its contours are complex in the sense that HNDZ was at one point an ally and at another a competitor.

[29] A number of factors might explain their posture toward IS. The most rational is that they were aware that some IS members might defect to their organization as they were being diminished by foreign intervention forces. Hence, it would be foolish to attack an organization that is already undergoing an exponential rate of attrition and whose members would likely add to one's own force capacity at some point. Other factors could be related to proximity and access to IS, which was either too mobile to nail down, or too sedentary to uproot. HTS might also have had fewer suicide bombing resources and thus made a choice for allocating their inventory in an ordered manner that was consistent with their capacity level.

Concluding Remarks

In this chapter, I considered two leading databases' coverage of the Syrian battlespace. My efforts were mainly geared toward conducting an organizational level analysis, where entities could be identified and their behaviors evaluated. I have demonstrated that an analysis of one dataset might be insufficient for gaining insight into what has transpired in a particular war zone. In my analysis, I not only drilled through the macro and meso levels, but amplified it in micro level detail where practicable. This allowed me to generate some data reconfigurations and variables that I hope serve to enlighten other analysts and reviewers.

According to ACLED data, IS was aiming to obliterate all competition with its suicide bombing campaigns. This can be contrasted with the HTS variant of al-Qai'da's presence in Syria, which was focused on taking out threats to their security by way of suicide bombing, to the near neglect of other insurgents. Both wanted the regime gone, but IS seemed to have wanted all others gone as well. Whereas HTS seems to have been focused on regime threats, IS appears to have sought a more complete battlespace dominance. Both seem to have wanted to win, but IS exhibited behavior consistent with a desire to ensure their gains against the regime were not undermined by competition. The following chapter, on Iraq data, should confirm or disconfirm whether my tentative judgment has much merit elsewhere.

Chapter 6: The Iraq Battlespace – Balancing Against Security Threats Versus Terrorizing Civilians

This chapter looks at the Iraq battlespace, between 2011 and 2018. Similar to the chapter on Syria, the primary focus is on targeting preferences by violent non-state actors who accept suicide bombing as part of their warfighting arsenal, as those seem to be the entities that generate the greatest quantity of violent attacks. The chapter first considers the insurgent landscape and then narrows the focus to a data analysis of organizations that exceeded a threshold of 100 suicide bombings. These parameters were chosen for a couple of reasons. First, on practical grounds, a chapter should be reasonable in length and not soak up the bulk of a book or dissertation. Secondly, excluding from the analysis non-state violent organizations whose use of suicide bombing falls below the threshold of 100 isn't likely to subvert the external validity of the sample being considered. In any case, there were few instances in which to observe and analyze groups other than the leading practitioners in Iraq, which was AQI-ISI-IS.

I use GTD data in a similar way as I did for the chapter on Syria. However, for ACLED data, this chapter differs slightly in that instead of ACLED covering only 2017 – 2018, as it did in the Syrian case, the dataset extends further back a year to 2016. The process, detailed in the appendix and methodology chapters, that was used for extracting Syrian data from ACLED remains identical.

Although suicide bombing in Iraq preceded the U.S. invasion in 2003,[1] the point of departure that this dissertation begins with coincides with the end of the U.S. military's combat operations at the end of 2011. This allows for the consideration of behavior committed by organizations that did not face a foreign, democratic, occupier (the Pape thesis). It then considers the data over the period in which a foreign occupying force (Iran) did enter the fray, as well as when U.S. airstrikes resumed (OPN Inherent Resolve). This allows the researcher to detect behavioral variations by violent non-state actors as they face changes in the battlespace in which they're operating. These changes, as has been hypothesized, may have a causal impact on target selection.

That being said, there are other force considerations that lay beyond occupation and air power that are worthy of exploration. Again, I propose a number of testable hypotheses that center on the behavior of suicide bombing practitioners in the Iraqi battlespace, which considers the degree to which threats might be perceived and the actions that accompanied the use of suicide bombing against an array of target sets. Given the situation in Iraq, it is rather unlikely that the use of suicide bombing is dependent on any foreign actors' behavior. The reason is that where externally derived power projection is absent and suicide bombings occur in large numbers, a logical fallacy inheres when one attempts to ponder a causal connection. Therefore, I took the approach that organizations engaged in suicide bombing have an intrinsic logic that might be worth uncovering from observing their own behavior toward others.

Iraq Data: 2011 – 2018

[1] The GTD records 1 such instance in 1999, 1 in February, 2003, and 1 in March; CPOST records 2 in February, 2003; SAND records 1 in 1999 and 1 in February, 2003.

This chapter's data is spatially restricted to the boundaries of the modern State of Iraq, whereas its neighbor Syria is considered separately in a different chapter. It is also temporally confined to a span of 8 years for several reasons. First, it captures the insurgent/incumbent battlefield as it was following the departure of a significant number of foreign forces. Although this period was preceded by a foreign occupation and resultant bloody insurgency, for all intents and purposes any formidable insurrection was rendered quiescent upon the departure of the bulk of American and allied combat forces. Secondly, the period under review takes into account the time in which all attacks (suicide and non-suicide attacks) were initially at a general lull (2011). Hence, trendlines depicting volume are more readily observable.

Thirdly, and relatedly, the 2011 – 2018 period allows for the investigation of attacks for which organizational claims were either not made, or in which the original databases' coders had difficulty attributing them to perpetrator groups, but also to those that were claimed and/or did receive attribution. This is significant, as it lends support to the notion that battlefield preparation and alliance consolidation preceded a more organized quasi-conventional assault campaign. Lastly, the scope is broad enough to allow for one to see shifts in targeting behavior, a key variable in this dissertation's central argument.

Cut One: GTD Data

Analysis of Suicide and Non-Suicide Attacks in Iraq

Graph 11: GTD 2011 – 2018 Iraq (without Data Exclusions)[2]

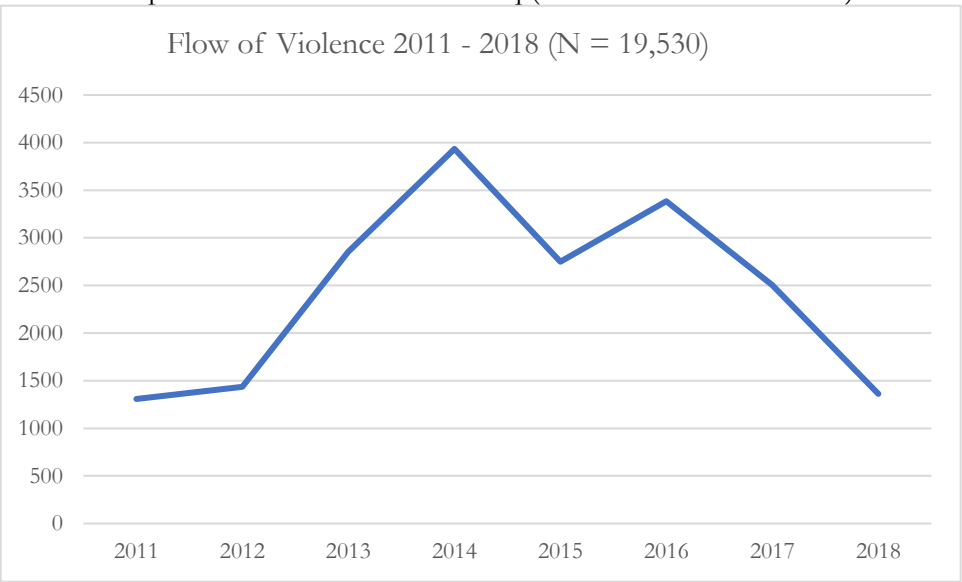


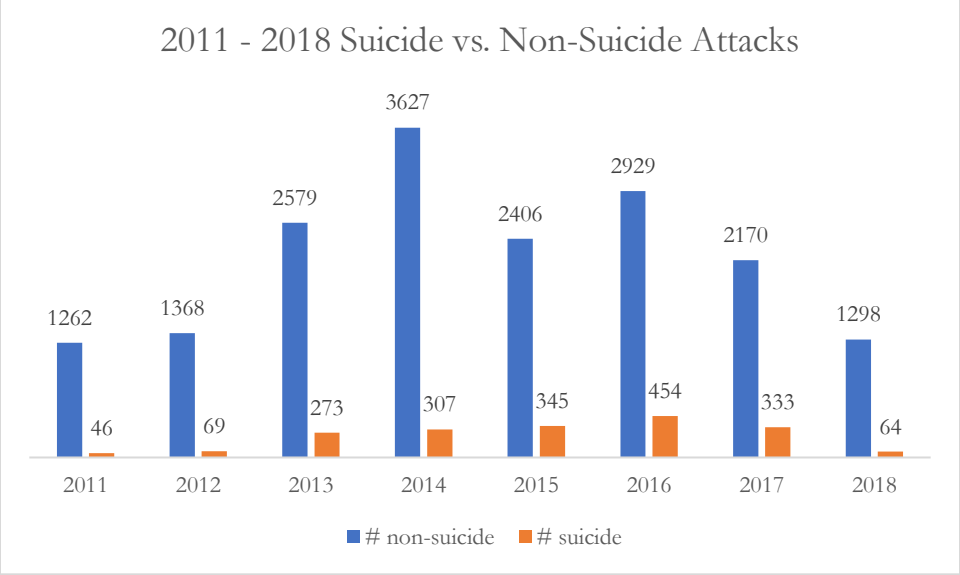
Table 21: GTD 2011 – 2018 Descriptive Statistics

Year	# non-suicide	% non-suicide	# suicide	% suicide	Total Attacks
2011	1262	96.48	46	3.52	1308
2012	1368	95.2	69	4.8	1437
2013	2579	90.43	273	9.57	2852
2014	3627	92.2	307	7.8	3934
2015	2406	87.46	345	12.54	2751
2016	2929	86.58	454	13.42	3383
2017	2170	86.7	333	13.3	2503
2018	1298	95.3	64	4.7	1362
Totals	**17639**	**91.29**	**1891**	**8.71**	**19530**

Note: The "%" in the given columns and "Totals" row equals the mean of either suicide or non-suicide attacks.

[2] For a discussion of data exclusion options, see the methodology chapter.

Chart 2: GTD 2011 – 2018 Descriptive Statistics for Iraq



Data Analysis. The above graph, table and chart depict the data for 2011 – 2018 in Iraq, according to the GTD, without any exclusions. It reflects a similar pattern as the above UCDP GED data, but breaks out the suicide versus non-suicide attack data. When one looks at the percentage of suicide attacks (% Suicide Attacks) in the table, one can see that the tactic was more incorporated into the whole beginning in 2013, a watershed year for suicide attacks. The percentage dipped slightly in 2014, but was on the rise and always exceeded a 10% share of overall attacks for three straight years after that (2015, 2016 and 2017).

The high-water mark for total annual attacks (3,934) was 2014, which represents a 111% increase over the mean (1,866) of the previous 3 years. In that same year, suicide attacks increased 138% over the average (129) of the previous 3 years and non-suicide attacks (1,736) increased 109%. What one can infer from this analysis is that the number of attacks (suicide and non-suicide) had more than doubled the previous three years' average, even though the percentage share of suicide

bombing dropped some. This seems to suggest that the cumulative incorporation of suicide bombing in the attack arsenal was patent over the course of the conflict years under study.

By 2018, the number of attacks (suicide and non-suicide) fell precipitously, which was likely a natural consequence of the fighting forces having been diminished within Iraq. It's interesting to note that the number (64) and percent (4.7) of suicide attacks during 2018 returned to 2012 levels (69 and 4.8%), as though there was some form of normal distribution on either side of the bell-shaped curve. It would be interesting to note whether this happened in other venues, among suicide attack practitioners engaged in insurgencies. Additional questions would also help to reveal some important relationships that suicide attacking has to other forms of attack. Namely, do rates of success rise or decline over time and what does that tell us about the practice itself?[3] What sorts of targets are being selected as gains and losses in territory occur? This type of analysis requires a month-over-month comparison, as the ebb and flow of the conflict is less well understood by analyzing annual data.

Table 22: Iraq 2011- 2018 Target Types Attacked

Target Type	**Count**	**Percentage**	**Target Type**	**Count**	**Percentage**
Airports & Aircraft	17	0.09	Police	2,838	14.53
Business	1,675	8.58	Private Citizens & Property	6,988	35.78
Educational Institution	167	0.86	Religious Figures/Institutions	380	1.95
Food or Water Supply	20	0.1	Telecommunication	12	0.06
Government (Diplomatic)	22	0.11	Terrorists/Non-State Militia	775	3.97
Government (General)	1,341	6.87	Tourists	6	0.03
Journalists & Media	96	0.49	Transportation	271	1.39
Maritime	1	0.01	Unknown	1,374	7.04
Military	3,175	16.26	Utilities	295	1.51
NGO	6	0.03	Violent Political Party	43	0.22
Other	28	0.14	**Total**	**19,530**	**100**

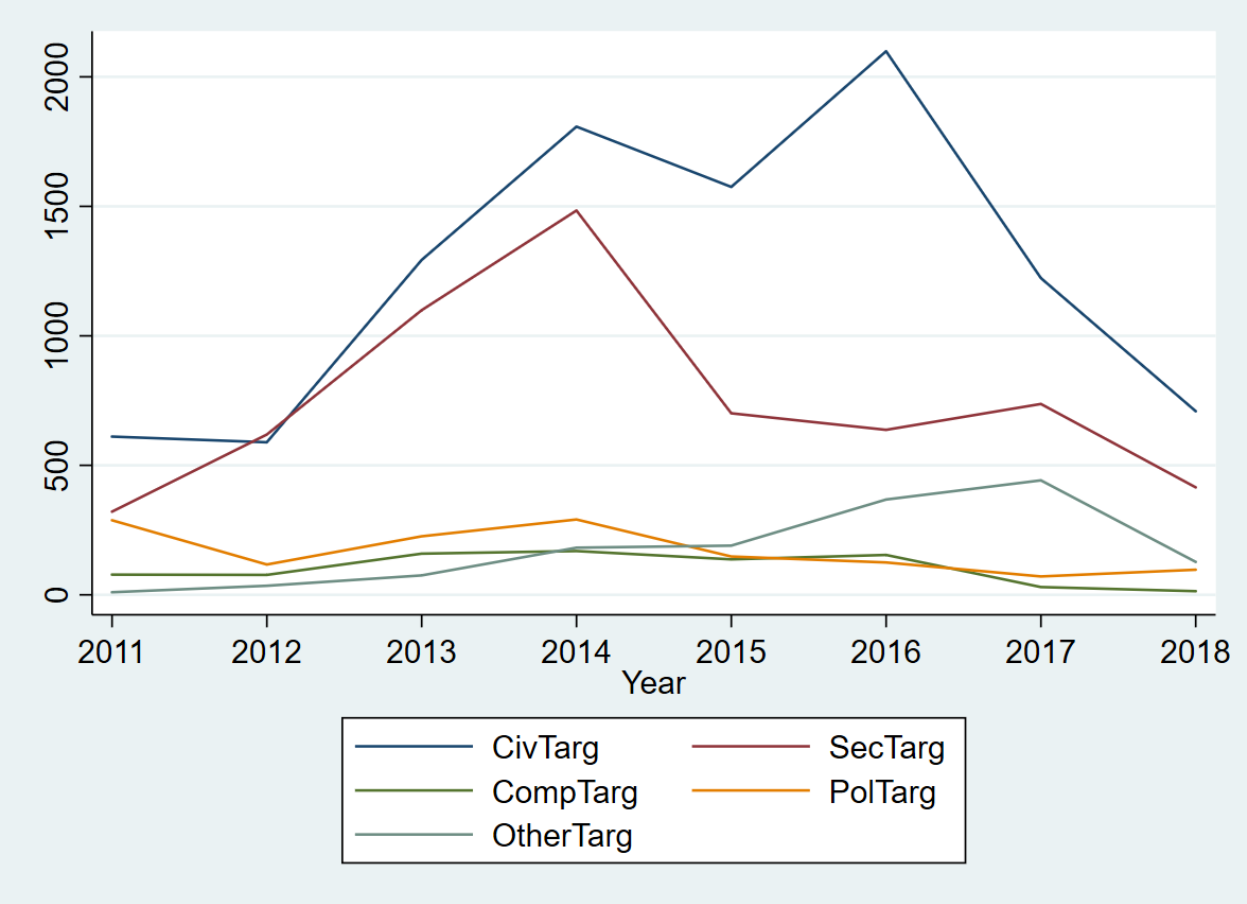
[3] I do look at this for both GTD and ACLED data.

Table 23: Iraq 2011 – 2018 Target Types Attacked (Condensed)

Target Type	Count	Percentage
Civilian	9,907	50.73
Security	6,013	30.79
Competitor	818	4.19
Political	1,363	6.98
Other	1,429	7.32
Total	19,530	100

Note: The condensed table consists of the following reduction principle: **Civilians** = Airports and Aircraft, Business, Educational Institution, Journalists & Media, NGO, Private Citizens & Property, Religious Figures/Institutions, Telecommunication, Transportation, and Utilities. **Security** = military and police. **Competitor** = Terrorists/Non-State Militia and Violent Political Party. **Political** = Government (Diplomatic & General). **Other/Unknown** = Other & Unknown.

Graph 12: Iraq 2011 – 2018 Target Types Attacked Over Time (N = 19,530)



Data Analysis: The above tables and graph indicate the types of targets being attacked by both suicide and non-suicide bombing during the given period, 2011 – 2018, in Iraq. In looking at target sets, it seems clear that attacks tended to be tracking fairly evenly, as they were allocated more toward civilians and security elements until they diverged around 2015, but especially 2016. That year, civilian attacks peaked, while security attacks dipped. One can also see the significance of competitor targeting begin to emerge at around the same time. During 2017, targeting preferences changed. As the number of civilian attacks fell, attacks on both security and competitors rose. All attack target types seemed to have been on the decline during 2018, but the order of preferences was civilian, security, then competitors. As with a similar graph in the chapter on Syria, the above depicts *what* was being attacked, but not *who* was doing the attacking, nor *how* so.

Table 24: Non-state Groups Attacking with Suicide and Non-suicide Bombing in Iraq 2011 – 2018 (N = 19,530)

Group	Attack Count	Percentage	Group	Attack Count	Percentage
Abu Jaafar al-Mansur Brigades	1	0.01	Kurdish Democratic Party-Iraq (KDP)	1	0.01
Al-Naqshabandiya Army	35	0.18	Kurdish extremists	2	0.01
Al-Nusrah Front	1	0.01	Kurdistan Workers' Party (PKK)	21	0.11
Al-Qaida in Iraq	415	2.12	Militants	2	0.01
Ansar al-Islam	3	0.02	Military Council of the Tribal Revolu..	20	0.1
Ansar al-Sunna	1	0.01	Mujahedeen Army	1	0.01
Arab Socialist Baath Party of Iraq	1	0.01	Mukhtar Army	4	0.02
Asa'ib Ahl al-Haqq	61	0.31	Muslim extremists	31	0.16
Badr Brigades	3	0.02	Popular Mobilization Forces (Iraq)	4	0.02
Death Squad (Iraq)	1	0.01	Pro-Government extremists	4	0.02
Gunmen	56	0.29	Revenge of the Martyrs (Tha'ir al-Shu..	1	0.01
Harakat al-Nujaba	1	0.01	Separatists	2	0.01
Hizballah-Iraq	1	0.01	Shia Muslim extremists	1	0.01
Islamic State of Iraq (ISI)	4	0.02	Sunni Muslim extremists	1	0.01
Islamic State of Iraq and the Levant	5,486	28.09	The Owners of the White Flags	2	0.01
Kata'ib Hezbollah	6	0.03	Tribesmen	4	0.02
Kata'ib Sayyid al-Shuhada	1	0.01	Unknown	13,351	68.36
Kata'ib al-Imam Ali	1	0.01	**Total**	**19,530**	**100**

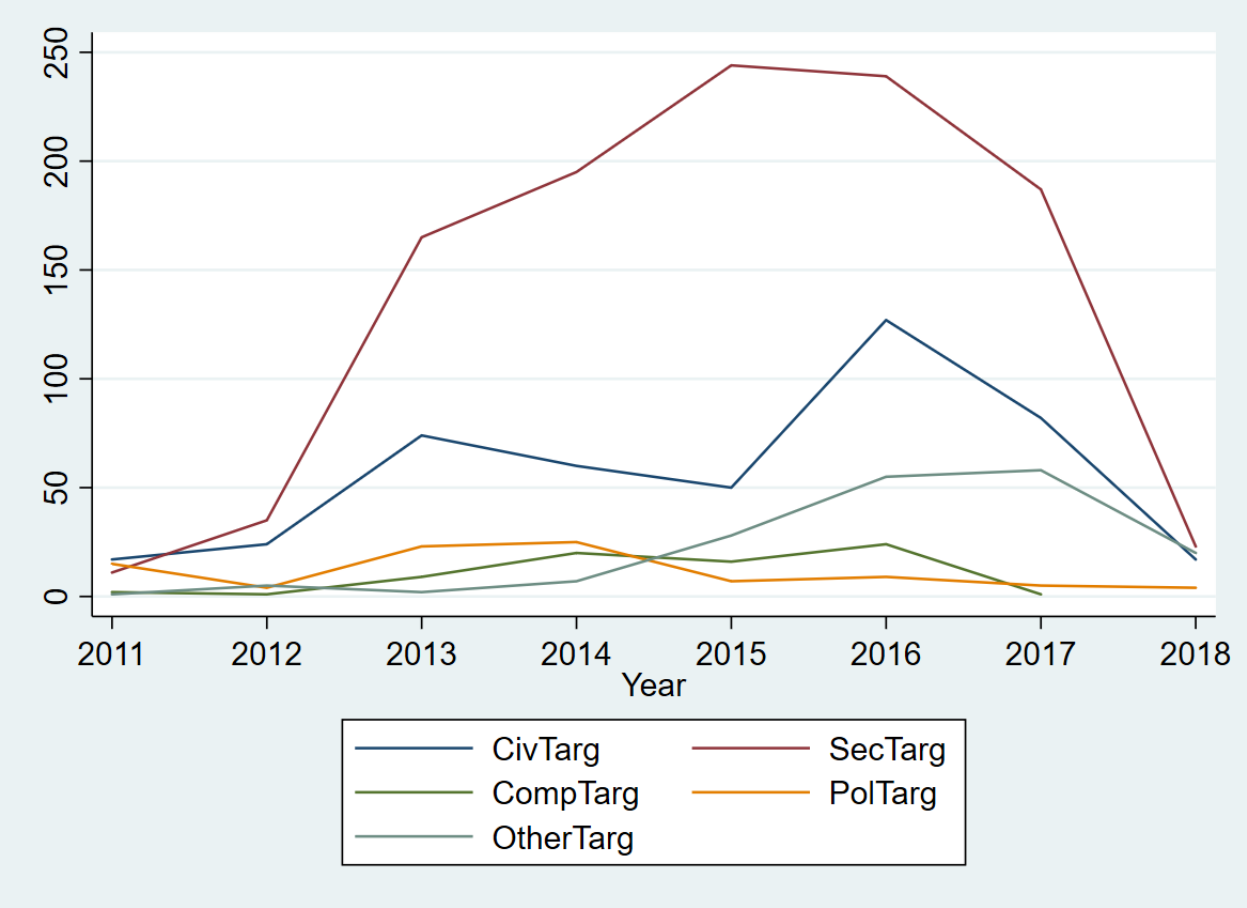
Table 25: Groups Using Suicide Bombing in Iraq 2011 – 2018 (N = 1,891)

Group Name/Target Type	Civilian	Security	Competitor	Political	Other	Total Attacks	% of Total
Al-Naqshabandiya Army	2	2	1	0	1	6	0.32
Al-Qaida in Iraq	11	25	0	8	0	44	2.33
Arab Socialist Baath Party of Iraq	0	0	0	1	0	1	0.05
Asa'ib Ahl al-Haqq	1	0	0	0	0	1	0.05
Islamic State of Iraq (ISI)	0	0	0	3	0	3	0.16
Islamic State of Iraq and the Levant	278	670	36	40	89	1,113	58.86
Militants	1	0	0	0	1	2	0.11
Military Council of the Tribal Revolution	0	2	0	0	0	2	0.11
Muslim extremists	1	1	0	0	0	2	0.11
Unknown	157	399	36	40	85	717	37.92
Total	451	1,099	73	92	176	1,891	100

Table 26: Summary of Suicide Bombings in Iraq 2011 – 2018 by Target Type (N = 1,891)

Target Type	Frequency	Percent
Civilian	451	23.85
Security	1,099	58.12
Competitors	73	3.86
Political	92	4.87
Unknown	176	9.31
Total	1,891	100

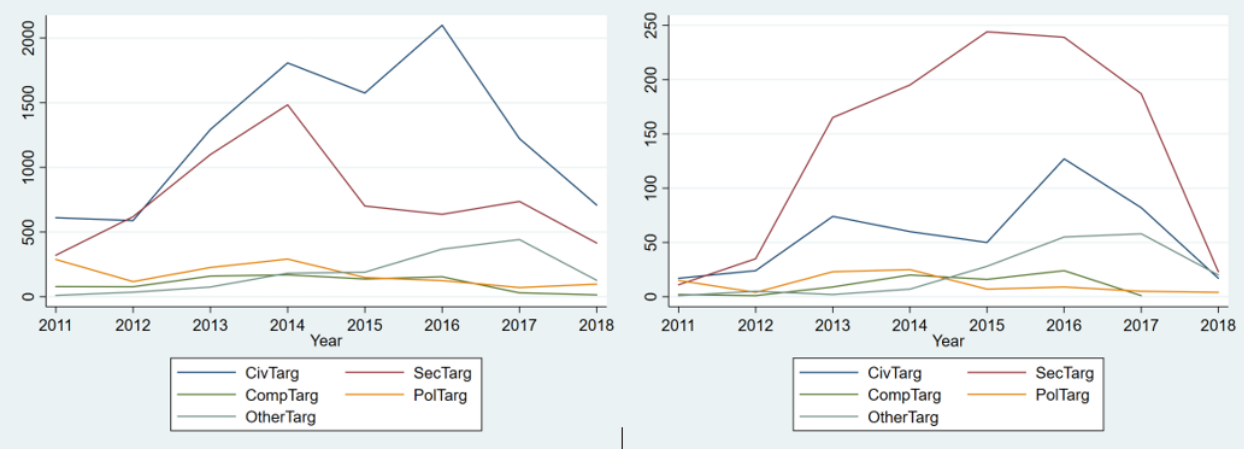
Graph 13: Suicide Bombings in Iraq 2011 – 2018 by Target Type and Year (N = 1,891)



Data Analysis: Although the GTD records nearly half the number of groups being active in the Iraqi civil war (35 or so) versus the Syrian civil war (66 or so), it is also clear that the number of overall attacks were much higher in Iraq (19,530) versus Syria (2,289). Proportionally, in Iraq, suicide bombings accounted for about 9.7% (1,891) of all attacks, whereas in Syria they accounted for nearly 16% (363). Those figures only inform us that suicide bombing occupied a greater share of attacks in Syria than in Iraq, but it should be obvious that the absolute numbers tell a story of insurgent intensity in the Iraq battlespace exceeding that which was observed in Syria.[4]

[4] Syria is approximately 44% of the physical size of Iraq and its population is also roughly 42% of Iraq's. Even if one were to account for uninhabited areas (e.g., deserts), the cities of Mosul and Baqubah had nearly as many attacks (2,194) than all of Syria (2,289) during the 2011 – 2018 period.

Graph 14: Comparison of All Attacks Versus Suicide Bombing in Iraq (2011 – 2018)



Data Analysis: The above side-by-side comparison features 2 previously provided graphs. On the left is "Iraq 2011 – 2018 Target Types Attacked Over Time (N = 19,530)" and on the right is "Suicide Bombings in Iraq 2011 – 2018 by Target Type and Year (N = 1,891). The trend on the left is that civilian and security targets diverge after 2014 and begin to converge during around 2017 – 2018. The trend on the right is very different, in that somewhere between 2012 and 2013, security targets always received preferential treatment with suicide bombing attacks, with a major spike in civilian targeting during 2016. Nonetheless, despite some minor peaks in civilian-centric suicide bombing, the overall norm was to reserve suicide bombing for security-centric targeting. In short, while civilians were always prominent targets, the main arsenal of suicide bombers was reserved for attacking targets that could threaten the insurgents' power.

The years 2013 and 2016 hold some relevance for theories about when insurgents who choose suicide bombing tend to use it. During 2013, IS solidified its identity and message and was on the rise toward its landholding apex a year later. A major emphasis was placed on attacking both civilian and security targets, but along its path to plunder it steadily increased its suicide attacks on

security targets. During 2016, as it was losing territorial control, it did markedly increase attacks against civilians, but even then the civilian target set was given only half the attention that suicide bombings against security elements were given.[5] Since IS (and AQ/ISI) were the lead suicide bombing practitioners in Iraq, the below analysis seeks to go beyond describing *how* they used the tactic, so as to uncover *why* they did so.

Analysis of AQI, ISI, and IS Trends

Before discussing IS (AQ/ISI), I should note the data reveal it wasn't only Sunni Salafi jihadists who were committed to suicide bombing in Iraq, even though they did occupy the majority of that particular space. The group known as al-Naqshabandiya Army (also known as JRTN), a Sufi order associated with Iraqi nationalism (Fishman 2016, 105), carried out 6 suicide bombing attacks, four in 2014 and two in 2015 over a brief span of time (5 months).[6] One suicide bombing attack was carried out (in 2011) by the Arab Socialist Baath Party of Iraq (secular) against a political target and one by Asa'ib ahl al-Haqq (Shi'a) against a Sunni mosque. Both suicide bombing attacks, if correctly attributed, seem to imply that socialist and Shi'a suicide bombings, while rare, were not absent.[7] The two attacks against security targets by Ba'athist group MCTR in August, 2014, also seem to be slightly confounding. Although suicide bombing by Shi'a and socialists is not presently a common trend, it had been so for some time in the 1980s (Schweitzer 2000; Pedahzur 2005: 29).

[5] A simple calculation reveals that suicide bombing attacks against the civilian target set for 2016 was 127 and against the security target set was 239 (or 53%). Another way to look at the matter would be to consider that there were 454 suicide bombing attacks that year, of which 127 (28%) were against the civilian target set and 239 (53%) were against the security target set.

[6] The group's total attack profile for 2011 – 2018 consisted of a total of 35 attacks. With the exception of one attack in 2012, all other recorded attacks occurred between August, 2014 and January, 2015. Of that number, 15 attacks were aimed at civilian targets, 15 at security, 2 at competitors, and 3 at unknown targets.

[7] The GTD offers AQI and IS as alternative group names for the former and latter attacks, respectively.

Setting aside suicide bombing attacks by what the GTD indicates were "militants," "Muslim extremists" and "unknown," I will focus on the organization that was re-branded from AQI to ISI, and finally IS (listed as ISIL in the GTD). First, the following were the GTD's recorded attacks by the group, with regard to their suicide/non-suicide distribution.

Table 27: AQI, ISI, IS Suicide Versus Non-Suicide Attacks in Iraq (N = 5,905)

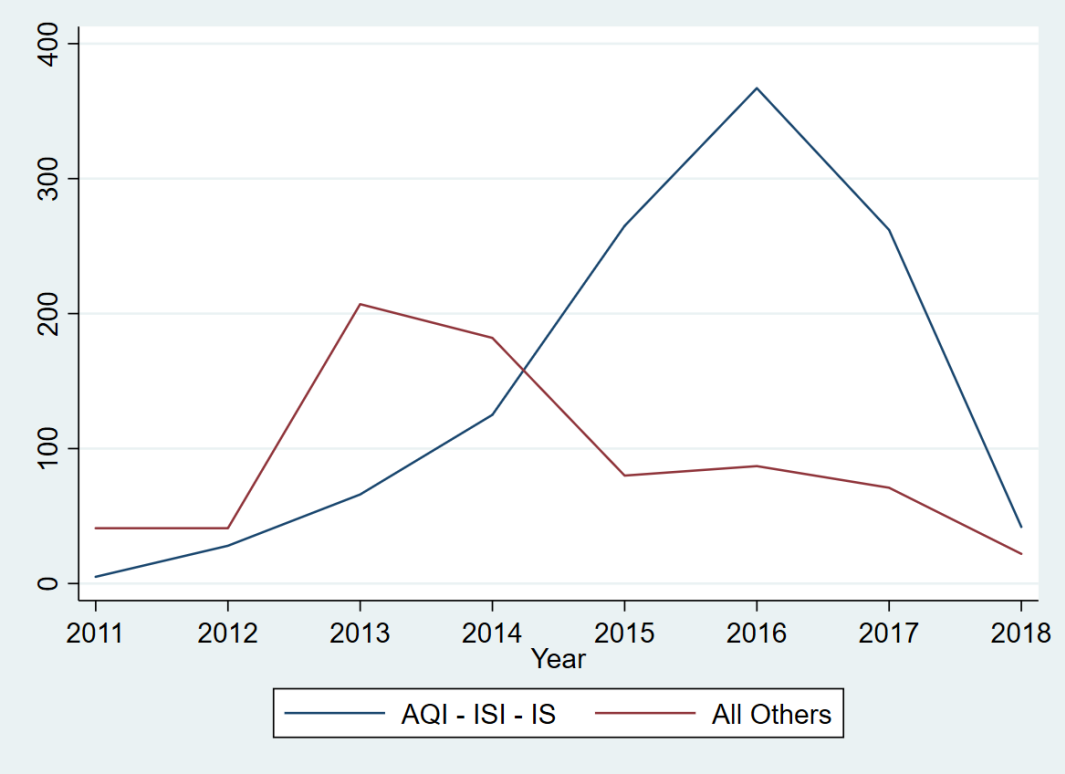
Group	**Suicide #**	**Suicide %**	**Non-Suicide #**	**Non-Suicide %**	**Total Attacks**
AQI	44	10.6	371	89.4	415
ISI	3	75	1	25	4
IS	1,113	20	4373	80	5,486
Total	1,160	20	4,745	80	5,905

Data Analysis: The table indicates that once AQI re-branded as IS, suicide bombings as a percentage of their attack profile doubled. The 44 attacks attributed to AQI occurred between January 18, 2011 and April 6, 2013. This was accompanied by a brief one-month period between June and July, 2011, in which 3 attacks were attributed to ISI. However, from April 18, 2013, onward there were 1,113 suicide attacks attributed to IS. This circumstance had to do with the intra-organizational turmoil that enabled IS to become AQI's successor, by way of an enhancement of its ISI branding for which AQ Central did not approve.

One observation, supported by the data, has to do with the significant suicide bombing increase that attended the split between AQ and its loss of organizational control. Namely, the monthly AQI average for suicide attacks was approximately 1.5 when AQ wielded some form of organizational tutelage, whereas with IS it was about 16 once it emerged as a stand-alone, self-run,

organization. It seems that emerging as a leading insurgent organization was accompanied by a substantial rise in suicide bombing. The correlation implies that either AQ inhibited the use of suicide bombing, or that the IS divorce from it generated a shift in tactical reasoning. Either way, battle victories and an unprecedented seizure of territory followed.

Graph 15: AQI, ISI, IS Suicide Versus All Other Suicide Attacks in Iraq (N = 1,891)



Data Analysis: As the above graph shows, suicide bombings may have been attributed to any given organization, until a cross-over point following the establishment of IS's battlefield dominance and declaration of a caliphate in 2014. This is consonant with the notion that once IS emerged as the clear "strong horse," demonstrating its ability to hold major cities and control ground arteries, suicide bombing was either attributed to it by default, or those wishing to be "martyrs" sought to do so on behalf of the incipient caliphate.

The Syrian chapter indicates a similar pattern. It can be said that what was happening in Syria was also happening in Iraq, but on a grander scale. IS was increasing its use of suicide bombing as it was gaining territory, while other entities tended to be diminishing on both counts. Rather than linger on the nuances of the GTD data, I will proceed to look at what can be gleaned from ACLED data, albeit during a shorter, but rather violent, time frame.

CUT TWO: ACLED DATA

Descriptive Statistical Analysis of ACLED Data in Iraq

Although the ACLED dataset (Raleigh et al 2010) codes conflicts as far back as 1997, it only began coding Iraq since 2016, and both Syria and Afghanistan since 2017). This dataset comes the closest to indicating territorial control, but its coding of suicide bombing is counted as a distinct sub-event type and not as though it occurred as part of a battle. Indeed, the coders claim to exclude suicide bombings that occur within battle (ACLED Codebook, 2019),[8] which therefore divorces territorial transfers from the type of violence that is used to achieve them. For instance, Sub-Event Type for "suicide" appears to always be paired with Event Type "Explosions/Remote Violence." However, it never appears under Event Type "Battle," which does contain Sub-Event Types with territorial control transfers (government or non-state actor takes/regains control).[9] Therefore, another means of measuring the relationship between territorial control and the attack type would have to be invented. The same is true for the relationship to target type, which is not even a consideration.[10]

[8] I confirmed this rule verbally in a conversation with ACLED's program director, Olivia Russell, during a phone call on November 5, 2019.
[9] See Table 2 on p. 7 for a visual reference. According to p. 10, "suicide bomb" is recorded when it occurs in the absence of any other engagements. So, it is logically discounted if it occurs during battle.
[10] "Violence against civilians" is listed as an "Event Type," but the three given options for "Sub-Event Type" (sexual violence, attack & abduction/forced disappearance) make it impossible to consider in relation to territorial control. It too suffers from the distinction that a "suicide bomb" is never indicated as an attack type against a civilian target type.

Since ACLED does code for territorial transfers, I looked at the data closely and sought to better define where suicide bombing attacks were taking place, but which had remained un-coded. My approach was fruitful. I conducted a re-coding exercise and found that a large number of suicide bombing cases were missed. I also coded for the target type being attacked and the violent means being used. The database covers considerably more cases than the GTD because it is dyadic, yet not directional, and isn't limited to "terrorist" attacks alone. That is, it logs conflict between two parties, which are generally the state and rebels. The practice allows for greater coverage, but doesn't readily enable the swift analysis of each side's behavioral patterns. As with most databases, due to ACLED's scope of coverage there are naturally areas for which any given researcher might wish a gap were filled. In my own case, I have taken some very time-consuming steps to do so and have achieved some reportable results.[11]

Prior to any modifications, ACLED data indicate that there were 344 suicide bombing attacks from 2016 – 2018. After implementing the additional coding rules, described in the appendix, the potential count then soared to 1,447. However, after having applied my uniquely created, painstaking,[12] removal/retention process, the final number consisted of 860 suicide bombing events for the three-year period. This can be compared to the GTD data, which counts 454 in 2016, 333 in 2017, and 64 in 2018. As a matter of gauging the internal validity of my ACLED

[11] The idea for going about solving my issue came from a series of emails I exchanged with ACLED's Communications Manager, Sam Jones. It was further enhanced by a colleague of mine at LookingGlass Cyber Solutions, Tim Hirsch, who wrote a couple of scripts in Excel that I could duplicate for use with a number of terms. I received additional assistance from Netka Georgieva, during our discussions of Tim's formulaic approach to the data, which she validated was the appropriate procedure to follow. All coding was then carried out by me alone. Any inherent errors are therefore of my own commission.

[12] I independently reviewed all 1,447 cases and hand-coded them for removal or retention. Based on that experience, I caution the replicator to consider ensuring all formulas are correct. I had initially started with 1,225 cases of which only 67 turned out to be suicide bombing incidents. Given that ACLED itself coded 344, I knew something was wrong with my approach and had to do it yet again, in order to generate the correctly coded cases. The error turns out to have been in the formula, which was an easy mistake to make and cost me many hours of unnecessary work.

data coding exercise, I ended up with the following count: 464 in 2016, 331 in 2017, and 65 in 2018. The total count for the same period was 851 in GTD's data and 860 in my modified ACLED data. Many of the attacks consisted of multiple bombers, for which I was able to calculate the number of individual bombers to be approximately 1,951.

The numbers I calculated likely undercount the sum in each category, since during the removal/retention process I always erred on the side of minimal counting. That is, when it appeared a double count was evident, due to multiple sources from which ACLED draws, I exercised a removal prerogative. Where terms such as "bombers" were used, I assumed 2 at minimum even if it was likely there were many more. I also had to gauge what appeared in the narrative column in comparison with what the other columns intimated. In each case, I didn't count what couldn't be verified; although I sometimes used alternative datasets (e.g., CPOST and SAND) to reduce confusion and documented in my notes where I did so. Occasionally, I searched beyond the data and researched interesting cases in order to enhance clarity.

A Glance at Non-Suicide Bombing Data

One byproduct of this arduous process was that it enabled me to see where non-suicide bombing TTPs[13] were being used and against whom they were typically employed. For instance, the total count for incidents during the period under study was 19,089 (10,980 of which were explosions of some sort). Of that number, I was able to independently look at a sample set of 1,447 that were mainly biased toward explosions that indicated some form of detonation. In scrutinizing that data

[13] I found it interesting that in both Syria and Iraq, the use of sticky bombs and planting IEDs in others' cars was a common tactic. Although it became a popular event to have burned alive captured Jordanian pilot Muath al-Kasasbeh, IS did the same to many others, including their own members. Usually, this was reserved as a punishment for fleeing combat. Of course, they also used all sorts of other means of execution, such as beheadings and other forms of torture and slaughter en masse.

subset, I observed that a seemingly larger quantity of IEDs were used during 2016 than during 2017 and 2018.[14] Even as I casually glanced at the use of chemical weapons, for which ACLED listed 26 instances, I observed that they were used only in 2016 (n = 16) and 2017 (n = 10).[15] This is interesting because the observation begs for future research to consider the conditions under which IEDs, but especially chemical weapons, were being used and against whom they were most often chosen.

Suicide Bombing Data

Although many of the suicide bombings in Iraq were clearly carried out by Islamic State, and ACLED allocates them accordingly, there were instances in which I made the automatic assumption that other entities had not used the attack type.[16] This is due to the fact that IS was mainly fighting alone against all other battlefield entities and even if one if its smaller affiliates carried out an attack, the reasonable assumption is that IS was the controlling entity.[17] The one interesting exception consisted of 16 incidents in which IS was attacked by suicide bombing. On all but one occasion the attack consisted of a single bomber. ACLED was unable to attribute these attacks to any group, labeling the party as an "unidentified armed group," but based on the region (Kirkuk and Ninewa with two exceptions near to those states) in which they were carried out it is reasonable to assume the attackers were Kurds.

[14] The above GTD data reveal that 2016 was a peak year for general violence, especially against civilians, but not necessarily through suicide bombings.
[15] This observation remains true, even when looking ahead at the 2019 and 2020 data.
[16] Analysis of the GTD data corroborates this reasonable assumption.
[17] In fact, ACLED never assigned responsibility for any suicide bombings to any other entity. Of the 344, they indicated "unidentified armed forces (Iraq)" as the perpetrator on 48 occasions. Below, I discuss 16 of those attacks as being carried out *against* IS. Nonetheless, ACLED's sources did not assert, nor did I find any evidence, that any other organization was claiming to have carried out suicide bombings. This is also the case with the GTD, during the same period, but not necessarily preceding it. A conclusion one might draw is that other groups claiming suicide bombing attacks were either outbid by IS, or, if like-minded, were coopted by them.

My investigation of the data also enabled me to observe that foiled attacks were rather common. That number was 378 for suicide bombing, but this finding should be considered alongside the understanding that a foiled attack was difficult to ascertain in practice. That is, sometimes the narrative stated an attack was "foiled" and at other times I had to consider the language of the narrative as being indicative of a foiled attack. An example would be where it was noted that a force (Iraqi military, police, PMF, etc.) had "repelled" an IS attack, which I juxtaposed with the fatality count. I consider a foiled attack to consist of the inability of a suicide bomber to have exploded on a target, due to the intervention of other forces. There were a few failed attacks as well. I consider failed attacks to consist of premature detonations, or what would best be described as accidental discharges.

There were some occasions in which a suicide bomber was apprehended, which I found to be interesting for future micro-level consideration. For instance, if one were to better understand the conditions under which apprehensions were able to be made, it is possible to gauge what enemy-centric counter-terrorism efforts work and what do not. If one wanted to conduct interviews, as some scholars have in the past (e.g., Post, Sprinzak and Denny 2003), engaging the Iraqi government as a point of access might be a starting point.

The use of vehicles were likely undercounted. Some narratives explicitly stated that an SVBIED was used. In others, the narrative would consist of a description of a suicide bomber, or bombers, followed by a passive mention of a "booby-trapped vehicle" in which they traveled. To be clear, I consider a booby-trapped vehicle to be a VBIED, which is static and unmanned, but an SVBIED to be one that is attended by a human. Sometimes, an SVBIED consists of more than one

occupant. A cursory search for these in open sources will reveal that a crew-served weapon is sometimes manned atop of the vehicle. Many images of SVBIEDs that one might find on the internet are up-armored to appear as ramming machines, whereas others are simply average vehicles that are surreptitiously packed with explosives.

Table 28: ACLED Re-Coded Data for Suicide Bombings in Iraq 2016 – 2018 (N = 860)

Year	Count of Suicide Bombings	Number of Bombers Used
2016	464	1,118
2017	331	718
2018	65	115
Grand Total	**860**	**1,951**

Data Analysis: It is clear from the data that both the number of suicide bombings and the number of individual bombers had diminished over the course of time. Considering the efforts to dislodge IS, the obvious correlations are space and available personnel. That is, as territorial losses mounted, the available battlespace in which to launch attacks (in general, but suicide bombing specifically) would likely have been reduced. It's also reasonable to assume that a consequence of attrition was that the pool of available fighters was diminished. In short, we can see from the above that the general ratio of bombers per attacks seems to be nearly 3:1 in 2016, a little more than 2:1 in 2017, and just shy of 2:1 in 2018. However, none of these apparent relationships is indicative of targeting changes.

Below are some data-driven expressions of the Iraq battlespace, which explore the relationship between the use of suicide bombing and a variety of coded variables. The data will appear in ways that are similar to its display in the chapter on Syria, with the exception that most suicide bombing events are reflexively attributed to Islamic State (as noted above). What is even

more useful is that the number of attacks in Iraq were far greater, even within a similar timeframe, when compared to Syria. The advantage of this gruesome fact is that it is expected to make inferences about variables' relationships more robust.

A few changes to how the data was coded in Iraq, versus in Syria, should be noted. First, since the use of PMF (Popular Mobilization Forces) and TMF (Tribal Mobilization Forces) are considered to be competitor entities, when combined with Iraqi military or police they are considered to be security forces. That is, as forces that operate jointly with those that represent the state, I understand them to fall under the state's authority. Secondly, it was more difficult in Iraq to discern whether standoff military forces (air support) were Iraqi or Coalition-based. Oftentimes the narrative was unclear. Due to this confusion, the potential for air interdiction to be coded as a PCT score of 4 was common. The question to be resolved was whether standoff air support engaging an enemy remotely, in what was more akin to an aerial ambush, should be coded as a greater physical challenger threat than one that operated within closer quarters.[18] Therefore, the last data consideration I made was to eliminate all "foiled" attacks, which would serve to diminish the likelihood that I have misread material facts. I will discuss those attacks at the end of this chapter.

[18] I also had to make some routine judgment calls, which I documented thoroughly. One assumption I made was that unless the ACLED narrative made it clear that an attack was on a security target, it was considered to be against civilians. Hence, two different calls would be made for the following circumstance. First, four suicide bombers having been killed by security forces is assumed to be an interdiction by security on behalf of civilians. I would code that as a civilian target. The second scenario would be where a checkpoint was attacked. I coded that as a security target, despite any civilian deaths that might have ensued (even exclusively civilian deaths). There were a handful of cases in which it wasn't apparent who would have been targeted by suicide bombing. For instance, premature detonations, accidental discharges, detonations that were made when desperately evading pursuing forces, and exclusive air strikes (no ground contact). I coded those targets as "unknown." There was also a case in which I coded it as "sec/civ," since the narrative hadn't been clear enough to resolve which target was primary and which was secondary.

Table 29: Enhanced ACLED Data - Coding Suicide Bombing Targets by Battlefield Conditions

Target Type/Sub-Event Type	Air or drone strike	Armed clash	Attack	Change to group/activity	Disrupted weapons use	Excessive force against protesters	Gov. regains territory	Mob violence	Non-state actor overtakes territory	Remote explosive/land mine/IED	Shelling/artillery/missile attack	Suicide bomb	Grand Total
civ	1	25		1	4	1		1		4		122	159
comp		97			2		8				1	52	160
comp/direct air support		1											1
comp/foreign direct support		1											1
comp/foreign standoff support		1					1						2
comp/military/police/standoff & direct air support		1											1
foreign standoff support	1												1
sec	10	297	1		1		34		2	2	4	153	504
sec/civ		2											2
sec/foreign direct support	2	4											6
sec/foreign standoff or direct							1						1
sec/foreign standoff support	2	5					2						9
sec/standoff support							1						1
unknown	8			1	1							2	12
Grand Total	**24**	**434**	**1**	**2**	**8**	**1**	**47**	**1**	**2**	**6**	**5**	**329**	**860**

Note: The columns were derived directly from ACLED data, but I created the rows by going a step further in my disaggregation process, which was derived from embedded narratives.

Data Analysis: The above table demonstrates how ACLED's focus on "suicide bombing" as a stand-alone category enabled its coders to miss significant uses of the practice. Namely, suicide bombing was used quite regularly during armed clashes (n = 434). This was especially so, where security targets dominated the target set, followed by competitors and civilians. The table shows that

disaggregating target types, based on the dataset's existing narratives, is a viable path for better understanding how violence is applied. Although the main concern here is suicide bombing, extracting other specific attack methods (e.g., sticky bombs, burning people alive, etc.) could also be scrutinized by applying the data extraction process I have instituted.

The specific findings of the above descriptive statistics are that there is a clear bias toward using suicide bombings against both the incumbent regime and its supporters (PMF, and occasionally TMF).[19] The PMF, which was listed as "Military Forces of Iraq (2018-) Popular Mobilization Forces," made up the overwhelming majority of competitors opposing Islamic State through combat operations. The Kurdish Peshmerga were another formidable foe for IS, but not on the scale that I observed in Syria. TMF forces were engaged with suicide bombers on a handful of occasions, but the PMF were engaged far more. It's interesting to note that the TMF mainly consisted of Sunni Arab tribal fighters and the PMF consisted of a mixture of Sunni and Shi'a combatants. Taken together, and disregarding the Kurdish ethnicity of the Peshmerga, IS regularly used suicide bombing attacks against their sectarian coreligionists.[20]

Even from the above descriptive table, one can intuitively spot the fact that suicide bombings were not highly correlated with any form of foreign military support. That is, they did not

[19] Here, I'm not overlooking the Iranian influence with regard to PMF. However, in terms of suicide bombing attacks against a competitive entity, PMF were regularly attacked alone and alongside Iraqi state forces, for which ACLED did not name Iran as a party. By default, I have followed a similar path for the sake of coding. Even a look ahead to the 2019 data reveals a similar absence of suicide bombing being carried out against Iranian forces, even though their presence was clearly indicated by ACLED as a party to the conflict.

[20] For example, an event (data id = 6030064) that occurred on October 27, 2017, against advancing TMF units was described as "… An Islamic State SVBIED with an unknown number of children aboard attacked a gathering of the forces west of Rawa killing 4 fighters and wounded 7 others."

seem to occur in response to foreign intervention, occupation, or any other form of external domination. This was also the finding that obtained in the Syrian chapter. There is some sense one gets that security targets were hit far more frequently by suicide bombings when the state was regaining territory, rather than when a non-state actor was wresting control of it. This, however, is best explained by the temporal constraints of the data. During the 2016 – 2018 period, IS was not expanding as it had over the preceding years. Hence, a proper comparison to actions taken during its ascendancy, could not be made within the same (ACLED) data source.[21]

Beyond the above descriptive statistics and my subsequent interpretation, I sought to investigate the data in an inferential manner. Below are hypotheses that mirror what were put forth in the Syria chapter. Each one considers the relationship between the four variables that I created: PCT, Number of Bombers, Combined Arms and Vehicular. Again, the null hypothesis, H(0), to be tested in each case is that there is no relationship between any of the given variables, whereas the alternative hypotheses being tested are as follows.

Ha(1): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and the number of bombers used to attack it.

Ha(2): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether combined arms are used to attack it.

Ha(3): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether a vehicle is used to attack it.

Ha(4): I expect there to be a relationship between the use of combined arms and the number of suicide bombers used to attack a target.

Ha(5): I expect there to be a relationship between the number of suicide bombers and whether a vehicle was used.

[21] Winter (2017) made the same observation in his December 2015 – November 2016 study, for which he noted that defensive suicide bombing was far more common after 2015 (see 11, 15, 17, and 24 for pertinent references).

Ha(6): I expect there to be relationship between the use of vehicles and whether combined arms were used to carry out a suicide bombing.

Table 30: Pearson's Correlation Coefficient for PCT, Number of Bombers, Combined Arms and Vehicular

Variable	Mean	Std. Dev.	Min	Max
PCT	1.496462	0.8960028	0	4
Number of Bombers	2.258255	2.58605	1	49
Combined Arms	0.5165094	0.5000223	0	1
Vehicular	0.2794811	0.4490091	0	1

	PCT	Number of Bombers	Combined Arms	Vehicular
PCT	1			
Number of Bombers	0.1469	1		
Combined Arms	0.2254	0.4172	1	
Vehicular	0.0685	-0.0439	-0.06	1

Data Analysis: PCT and Number of Bombers are interval variables, where PCT consists of 7 possible values (Min = 0 – Max = 6) and Number of Bombers 50 (Min = 0 – Max = 49), with a range of measurement being -1 to 1. Combined Arms and Vehicular are dichotomous variables, where they each have 2 possible values (Min = 0 and Max = 1) and have a range of measurement between 0 and 1. Setting aside the top table (mean and standard deviation), which was explained in the chapter on Syria, the second table (with correlation coefficients) provides the results of the following hypothesis tests.

Ha(1): We can reject the null hypothesis that there is no relationship between the PCT value and the number of suicide bombers that attacked the target, in which case we can accept the alternative hypothesis. Although the relationship (r = .1469) is positive, the significance is small. This finding would indicate that the threat value of a potential target for suicide bombing might be a factor for insurgents who were considering whether to attack or save their resources for a more worthy target. I'm inclined to think that such a macrolevel analysis belies the microlevel manner by which IS swarms certain key targets with waves of suicide bombers. This would explain why the significance level is fairly small.

Ha(2): We can reject the null hypothesis that there is no relationship between the PCT value and whether combined arms were used in a suicide bombing attack, while accepting the alternative hypothesis. The relationship is positively signed (r = .2254) and its significance is low. This finding could be interpreted to mean that sophisticated coordination accompanies suicide bombing attacks, given the threat posed by the actor in question. As with the above consideration of the number of suicide bombing attackers, a similar set of facts might be uncovered by observing the instances in which combined arms played an outsized role when key targets were being attacked. Ha(4) provides some empirical evidence for this possibility.

Ha(3): We cannot reject the null hypothesis that there is no relationship between the PCT value and whether a vehicle was used in a suicide bombing attack. The relationship is positively signed (r = .0685), but its significance is insufficient. This finding would indicate that the degree of threat posed by an entity targeted for a suicide bomb attack is not relevant for considering whether vehicles were

used. One explanation might be that the absence of correlation could be an artifact of the data being aggregated at an unnecessarily high level, as noted in the Ha(1) and Ha(2) results.

Ha(4): We can reject the null hypothesis that there is no relationship between the use of combined arms and the number of suicide bombers attacking a target ($r = .4172$). We can accept the alternative hypothesis, which is positively signed and for which its significance is medium. This finding seems to imply that there is a propensity to enhance a sophisticated coordination attack (combined arms) with a force multiplicative effort (more suicide bombers). As a matter of cautious interpretation, many of the incidents in which more than one suicide bomber took action were coded as combined arms assaults. Indeed, more than half (443 of 860 events) consisted of combined arms attacks and of that number 373 featured more than one suicide bomber.

Here, it seems the data indicate a need to investigate the matter further, so that a better understanding of IS's decision patterns can be illuminated. In looking at target sets, it was far less common for combined arms and multiple suicide bombers to be used against purely civilian targets. Out of the 159 civilian targets that were struck, 120 consisted of a single bomber (39 used 2 or more) and 47 instances were combined arms. Against civilians, on 38 occasions more than one bomber was coupled with a combined arms attack. Terrorism through suicide bombing was comparatively rare.

The overwhelming majority of combined arms and/or multiple suicide bombers was dedicated to either competitor or security targets. Against either competitor or security targets (not

counting attacks against IS itself), 362 out of 689 consisted of multiple bombers, of which 331 were also designated as combined arms. Suicide bombing as guerilla warfare was the norm.

Ha(5): We cannot reject the null hypothesis that there is no relationship between the number of suicide bombers and the use of vehicles. The alternative hypothesis, which is negatively signed ($r = -.0439$), does not meet the significance threshold. This finding indicates that as the number of suicide bombers increased, the propensity for vehicles to be involved decreased, but not in such a way that it suggests inferential importance. This is probably related to the observation, made by many, that individual fighters tend to carry belt/vest bombs on their person (BBIEDs).

Ha(6): We cannot reject the null hypothesis that there is no relationship between the use of vehicles and whether a combined arms assault was used for a suicide bombing attack. The relationship is negatively signed ($r = -.06$), but does not meet the significance threshold. This finding indicates that where a combined arms assault was used for a suicide bombing attack, the propensity for vehicles to be involved could have decreased, but not in a statistically significant way. This might mean that one acted as a substitute for the other.

Given the results of Ha(5) and Ha(6), I investigated when vehicles were most commonly used. The following table illustrates my findings.

Table 31: SVBIEDs in Iraq (2016 – 2018) by Combined Arms and Target Type

Target Types	No Combined Arms	Combined Arms	Total
civ	29	11	40
comp	26	19	45
foreign standoff support		1	1
sec	67	72	139
sec/civ		1	1
sec/foreign direct support	2	1	3
sec/foreign standoff support	1	5	6
sec/standoff support	1		1
unknown	2	2	4
Grand Total	**128**	**112**	**240**

Vehicles were used in 28% of suicide bombing attacks (240 out of 860). Excluding 4 "unknown" targets,[22] when juxtaposed to the combined arms data, they were used 46% of the time (110 out of 240). Against civilians, they were used 17% of the time (40 out of 240) and against security or competitor targets 82% of the time (196 out of 240).[23] Looking at civilian targets that were attacked by an SVBIED, on 11 occasions combined arms were used in conjunction. At the micro level, there were three noteworthy incidents, in which more than 2 suicide bombers were used. One consisted of a multi-pronged assault, featuring 5 suicide bombers, against a restaurant in which Iranians were dining.[24] In another incident, 3 SVBIEDs were used against displaced civilians.[25]

[22] "Unknown" in this instance, since the SVBIEDs were destroyed by air interdiction efforts. The data didn't make it clear that they were headed toward a target of any discernible civilian, competitor, or security import. Therefore, the total for the "no combined arms" column would be 126 and the "combined arms" column would be 110.
[23] Again, excluding the "unknown" target set.
[24] The event, which is identified by ACLED's data_id was 6228959. It was linked to another series of attacks at the Fadak restaurant on September 14, 2017. I found additional information here: https://www.upi.com/Top_News/World-News/2017/09/14/Coordinated-attack-at-Iraqi-restaurant-kills-dozens/5201505397636/.
[25] ACLED data_id 6724614.

In the third, a foiled assault on a "gas-cylinder factory" by what appears to have been an SVBIED with an additional 6 individual suicide bombers was carried out.[26]

The above observations indicate that as a matter of resource allocation, SVBIEDs were mainly reserved for guerilla warfare at the expense of their potential use as a tool of terrorism. Yet, as can be seen from the microlevel analysis, they were sometimes deployed against civilian targets and then were selectively used in tandem with other forms of attack against them. If one were to conceive of suicide bombing attacks against civilians as a form of signaling, it might be appropriate to say that one-off attacks were a form of announcing one's presence, demonstrating at least a minimal degree of commitment to a cause, or possibly as a ruse for distracting security elements. When used in a combined arms assault, it seems the signal was intended to be stronger, louder, and meant as a way of enhancing a message.

Since the use of SVBIEDs against competitor and security targets were almost evenly used with or without combined arms, it seems a fair conclusion would be that they were interwoven into the fabric of the attacking party's arsenal. That is, they were a form of warfare technology that a fighting force sought to bring to bear against an armed competitor in the hopes of achieving battlefield victories over them.

[26] ACLED data_id 6059195.

The Efficacy of Suicide Bombing: The Implication of Foiled Attacks: GTD and ACLED Data

Looking at foiled attacks is one prism through which to gauge the efficacy of suicide bombing. There has been some debate as to whether "terrorism" is a useful or useless endeavor, which has often been intertwined with whether suicide bombing is a strategic net loss or gain. Since suicide bombing has been used differently in disparate combat venues, by distinct actor types, a good means for measuring its usefulness is to analyze its rate of success or failure. This is because a rationally calculating organization could reasonably expect that if a precious form of weaponry was becoming more difficult to effectively wield, a crossover point might arise for deciding to terminate its use.

The notion of rationality, however, is probably too difficult for any analyst to neatly apply to others. For example, in the context of gambling, one might reason that since "the house always wins," a career poker player is simply behaving foolishly. Yet, the mean rate of failure is not what motivates the gambler to return to the table after experiencing devastating losses. That actor type is likely counting on some combination of luck and skill, with a dose of obsessiveness, to achieve the "big win." Kahneman & Tversky (1979: 287) noted that the causal mechanism in this judgment is a shift in reference points.

In the case of suicide bombing, or any other kinetic strike option, when viewed from an organizational perspective it becomes even more difficult to assess through a so-called rational actor's eyes. Nonetheless, we can at least peer into their reality and attempt to locate where a decision point to discontinue its use likely should have arisen. That point can be observed by considering the below tables.

Table 32: Rate of Success for All Suicide Bombings in Iraq (2011 – 2018) GTD Data

Success/Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
Unsuccessful	7	8	21	24	89	189	153	32	523
Successful	39	61	252	283	256	265	180	32	1368
Total	**46**	**69**	**273**	**307**	**345**	**454**	**333**	**64**	**1891**
% Success Rate	84.78	88.41	92.31	92.18	74.2	58.37	54.05	50	72.34

Table 33: Rate of Success for AQI-ISI-IS Suicide Bombings in Iraq (2011 – 2018) GTD Data

Success/Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
Unsuccessful		1	4	4	63	141	98	14	325
Successful	5	27	62	121	202	226	164	28	835
Total	**5**	**28**	**66**	**125**	**265**	**367**	**262**	**42**	**1160**
% Success Rate	100	96.43	93.94	96.8	76.23	61.58	62.6	66.67	71.98

Table 34: Rate of Foiled & Failed for All Suicide Bombings in Iraq (2016-2018) ACLED Data

Failed or Foiled/Year	**2016**	**2017**	**2018**	**Total Failed & Foiled**
Failed	3	5		8
Foiled	219	126	33	378
Total Failed & Foiled	**222**	**131**	**33**	**386**
Total Suicide Bombings	464	331	65	860
% Successful	52	60	49	55

Data Analysis: The above three tables provide some unique insight into the rate of success or failure associated with suicide bombing in Iraq. The top table, which considers aggregate suicide bombings for all entities, indicates that the rate of success steadily rose from 2011 through 2014, when IS experienced meteoric gains. During 2015, the absolute number of attacks increased, but relative success began to diminish. During the following years, absolute numbers spiked in 2016 and fell from there, as the success/failure rate approached somewhere near 50%.

The middle table considers only suicide bombings associated with AQI-ISI-IS and demonstrates a similar pattern from 2011 through 2014. However, from 2015 onward, it seems suicide bombings remained more successful than not, in that IS did not experience a less than 50/50 chance of success. Strikingly, according to the GTD data, even with poorer year-over-year results, the steady rise from 2014 to 2016 indicates that the prospect of failure was not a significant deterrent. Indeed, during 2016 the largest number of suicide bombing attacks were carried out by the entity, with a success rate that remained fairly similar during 2017 and 2018. It would seem then, that when the probability of success to the number of attacks was 2:3, discontinuing the practice would have been considered subrational.

The bottom table's ACLED data, which only covers 2016 – 2018, tells a somewhat different story. Similar to the GTD data, one can see that from the peak year for suicide bombings, 2016, as the absolute numbers declined over the next two years, the relative rate of success did not shift too drastically. It hovered around the 55% mean, within less than a 5% deviation. This would indicate that although the capacity to deploy suicide bombers might have been reduced over time, there didn't appear to be a decision to stop using them entirely.

All three tables imply that rates of success/failure were not decision indicators for dissuasion. Success did seem to breed success, but even under conditions of failure there seemed to have been a degree of tenacity for the use of suicide bombings. Considering the 2016 – 2018 period, the middle table's higher success rates might reflect a tendency by AQI-ISI-IS to have laid more claims to successes and remained quiescent when failures occurred. The top and bottom tables

represent country-wide suicide bombings, which were not always associated with IS. Even if I were to deduct the 16 suicide bombing attacks against IS, the numbers would still appear as follows.

Table 35: Rate of Foiled & Failed for All Suicide Bombings in Iraq (2016-2018) ACLED Data; Attacks on IS Deducted (N = 844)

Failed or Foiled/Year	**2016**	**2017**	**2018**	**Total Failed & Foiled**
Failed	3	5		8
Foiled	219	126	33	378
Total Failed & Foiled	**222**	**131**	**33**	**386**
Total Suicide Bombings	456	323	65	844
% Successful	51	59	49	53

Concluding Remarks

The forgoing analysis was drawn from two independent data sources, which when looked at separately, generated some interesting conclusions. There were also some insights to be gleaned from comparing them during periods in which they overlapped. One finding, for which I was surprised, was the degree to which I was able to confirm the internal validity of my recoding exercise. The ACLED data obscures the use of suicide bombing in the way it codes events, but I was able to reveal what was previously hidden with such precision that the difference between GTD and ACLED data was a mere 9 events out of 860 (a variance of 1%). The lesson to be drawn is that scholars who seek to study suicide bombing might wish to consider that without some heavy lifting, ACLED data's reliability is a bit tenuous. This does not mean it is without merit. It simply suggests that levels of engineering and parsing are required to make it speak more clearly.

Analysis of the GTD data, which spanned an 8-year period, showed that an incorporation of suicide bombing as part of a warfighting arsenal coincided with victory (2013 – 2014), stasis (2015 – 2016) and defeat (2016 – 2018). It also became clear that the initial seizure of vast amounts of territory followed an increased use of suicide bombing, which came after Islamic State's organizational rupture with al Qa'ida.

How it was employed tells an even more interesting story. Comparing suicide bombing against non-suicide attacks enabled me to see that the former was overwhelmingly directed at security targets, whereas the latter was mainly aimed at civilian targets. This was despite varying levels of victory, stasis, or defeat. The GTD data show that as the conflict ran its course, others who failed to claim or were not understood to have committed suicide bombing attacks, held onto a shrinking share of the pie. Therefore, IS cannot be said to have been using suicide bombing as an act of desperation, but rather, it appears, as a means for conquest, dominance, and positional defense in the battlespace.

Based on ACLED data, which spanned a 3-year period, I was able to identify that suicide bombings were mainly used against security entities, whether those forces were acting alone or in combination with militias. They were also more often used in combined arms and with multiple bombers against a security target set. This use included many circumstances in which coreligionists of the same Sunni sect were targeted, which was a finding that further diminishes any lasting power the Pape thesis might retain. SVBIEDs were also largely directed at armed targets (security and competitor forces) that could pose a physical threat and not so much against those that could not

(civilians). In short, in Iraq, suicide bombing was largely a tool of guerrilla warfare and less so an instrument of terrorism.

The lessons drawn from considering both GTD and ACLED data were many. GTD data revealed that although suicide bombing in Iraq was predominantly a Sunni Muslim phenomenon, it was not entirely so. ACLED data revealed that Islamic State itself was targeted on more than a dozen occasions by suicide bombers. Scrutinizing both datasets enabled me to consider the possibility that diminishing marginal returns might have caused IS to reconsider its use of suicide bombing. However, the lesson to be learned here was that whatever their reasoning might have been, so long as success would ensue at least half the time there was no perceptible diminution on the basis of a success/failure calculus.

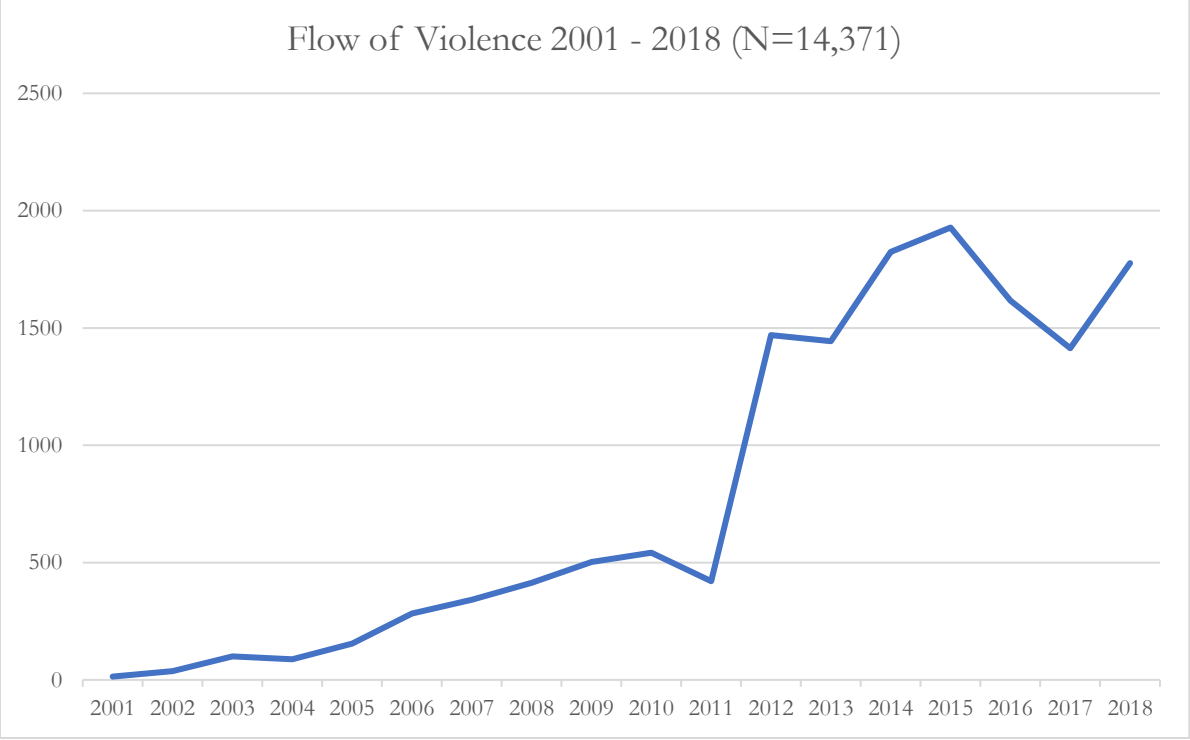
Chapter 7: The Afghanistan Battlespace – Balancing Against Security Threats Versus Terrorizing Civilians

This chapter looks at the Afghanistan battlespace, between 2001 and 2018. Similar to the chapters on Syria and Iraq, I focus on targeting preferences by violent non-state actors who accept suicide bombing as part of their warfighting arsenal. The chapter first considers the insurgent landscape and then narrows the focus to a data analysis of the two organizations that became leaders in the suicide bombing space: the Taliban and the Khorasan Chapter of the Islamic State (IS).

Cut One- GTD Data

Analysis of Suicide and Non-Suicide Attacks in Afghanistan

Graph 16: GTD 2001 – 2018 Afghanistan (without Data Exclusions)[1]



[1] For a discussion of data exclusion options, see the methodology chapter.

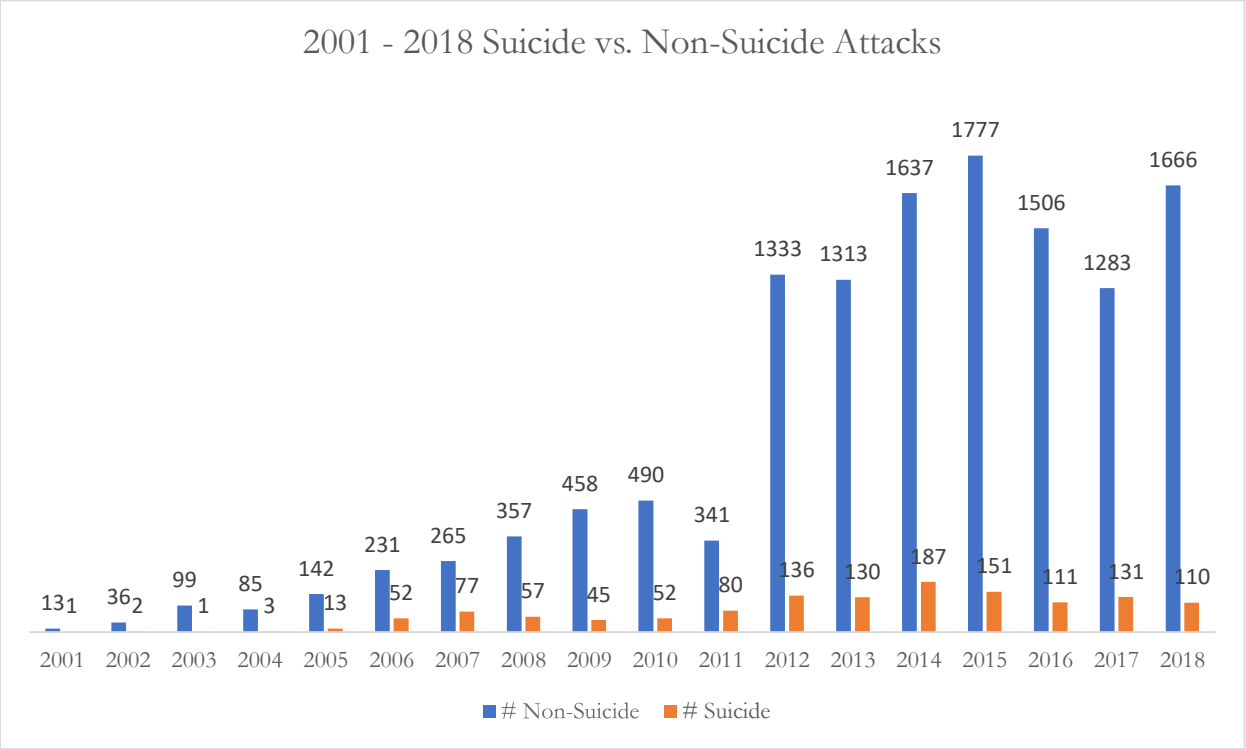
Data Analysis. According to the GTD, Afghanistan experienced 14,509 total attacks between 1973 and 2018, however, the number of suicide and non-suicide attacks between 2001 (when the first suicide bombing attack was carried out) and 2018 was 14,371. Of that number, the following table and graph indicate the years during which the percentage of suicide bombings occupied a greater proportion of the overall attack type.

Table 36: GTD 2001 – 2018 Descriptive Statistics for Afghanistan

Year	# non-suicide	% non-suicide	#Suicide	% Suicide	Total Attacks
2001	13	92.86	1	7.14	14
2002	36	94.74	2	5.26	38
2003	99	99.00	1	1.00	100
2004	85	96.59	3	3.41	88
2005	142	91.61	13	8.39	155
2006	231	81.63	52	18.37	283
2007	265	77.49	77	22.51	342
2008	357	86.23	57	13.77	414
2009	458	91.05	45	8.95	503
2010	490	90.41	52	9.59	542
2011	341	81.00	80	19.00	421
2012	1333	90.74	136	9.26	1469
2013	1313	90.99	130	9.01	1443
2014	1637	89.75	187	10.25	1824
2015	1777	92.17	151	7.83	1928
2016	1506	93.14	111	6.86	1617
2017	1283	90.74	131	9.26	1414
2018	1666	93.81	110	6.19	1776
Totals	**13032**	**90.68**	**1339**	**9.32**	**14371**

Note: The "%" in the given columns and "Totals" row equals the mean of either suicide or non-suicide attacks.

Chart 3: GTD 2001 – 2018 Descriptive Statistics for Afghanistan



Data Analysis. The above graph, table and chart depict the data for 2001 – 2018 in Afghanistan, according to the GTD, without any exclusions. When one looks at the percentage of suicide attacks (% Suicide Attacks) in the table, one can see that the tactic's use approached 20% during 2006 – 2007, and 2011. Notably, however, the annual number of suicide bombings never exceeded 100 until 2012, at which point it always exceeded 100 attacks through 2018. Given this observation, one might conclude that the capacity to carry out suicide bombings rose over time. One also might conclude that the will to do so was fueled by a perception of its efficacy for the objectives toward which its practitioners sought to advance.

In looking at the above graph, one can easily spot a marked change during 2012. Therefore, in my analysis of the data, I reference pre-2012 violence as distinct from 2012 – 2018 violence.

During the pre-2012 period, the average annual attacks amounted to a mean of 264 (2900 attacks over a span of 11 years) and suicide bombings accounted for about 10.6% of all attacks on average (n = 383). Subsequently, the average annual attacks for the 2012 – 2018 period amounted to a mean of 1,639 (11,471 over a span of 7 years) and suicide bombing accounted for about 8.4% (n = 956).

As overall violence increased fourfold during the second (shorter) time period, the actual number of suicide bombings doubled. The degree to which it was incorporated into the arsenal of violent attacks was generally low in comparison to non-suicide bombing attacks. This is similar to what was seen in Iraq. In general, it seems that once the number of overall attacks rose substantially (an absolute value), the number of suicide bombings tended to rise and its share of the violence space tended to remain or fall slightly (a relative value). Two questions loom large. First, what accounts for the massive spike in violence and its having been sustained at such high levels during and after 2012? Secondly, who were the non-state actors involved and are there observable changes in the acts of violence that can be explained?

The first question can be answered by understanding the Taliban as being particularly capable of adapting their fighting style, especially through the use of "asymmetric tactics," such as suicide bombing (Giustozzi 2012: 12; Zohar 2016: 436). For instance, Rome (2013) observes that after the Taliban incorporated suicide bombings into its main repertoire of violence (circa 2006), its use tended to level off for the years 2007 – 2010. He attributes this "flat-line" to poor competency among the bombers themselves, but this disadvantage appears to have been resolved during the second period.

Beyond tactics, but complementary to them, the Taliban also made some internal organizational adjustments. For instance, they began recruiting fewer foreign fighters, while filling the personnel gap with more Afghan nationals (Farrell and Giustozzi 2013). In short, in the lead up to 2012, the Taliban were refitting and preparing to launch more suicide bombings as a key feature of their evolved insurgency (Farrell and Giustozzi 2013: 865). The subsequent drawdown of coalition military personnel also opened the door for the Taliban to ply their craft more forcefully and successfully.

Below, I seek to answer the second question by analyzing the organizations involved in the conflict, as it relates to their violent behavior. Ultimately, I show that there are distinctions between groups that use suicide bombing and there are ways to explain what these differences mean. For instance, one interesting development that occurred in the post-2012 period was that the Taliban was no longer the only insurgent force seeking a favorable outcome through suicide bombing. As other entities' suicide bombing campaigns either faltered (e.g., the Haqqani Network), or ceased (e.g., Hiz-B-Islami, AQ, and TTP), the Taliban were sharing the suicide bombing space with an emerging Islamic State.

Table 37: Afghanistan 2001- 2018 Target Types Attacked

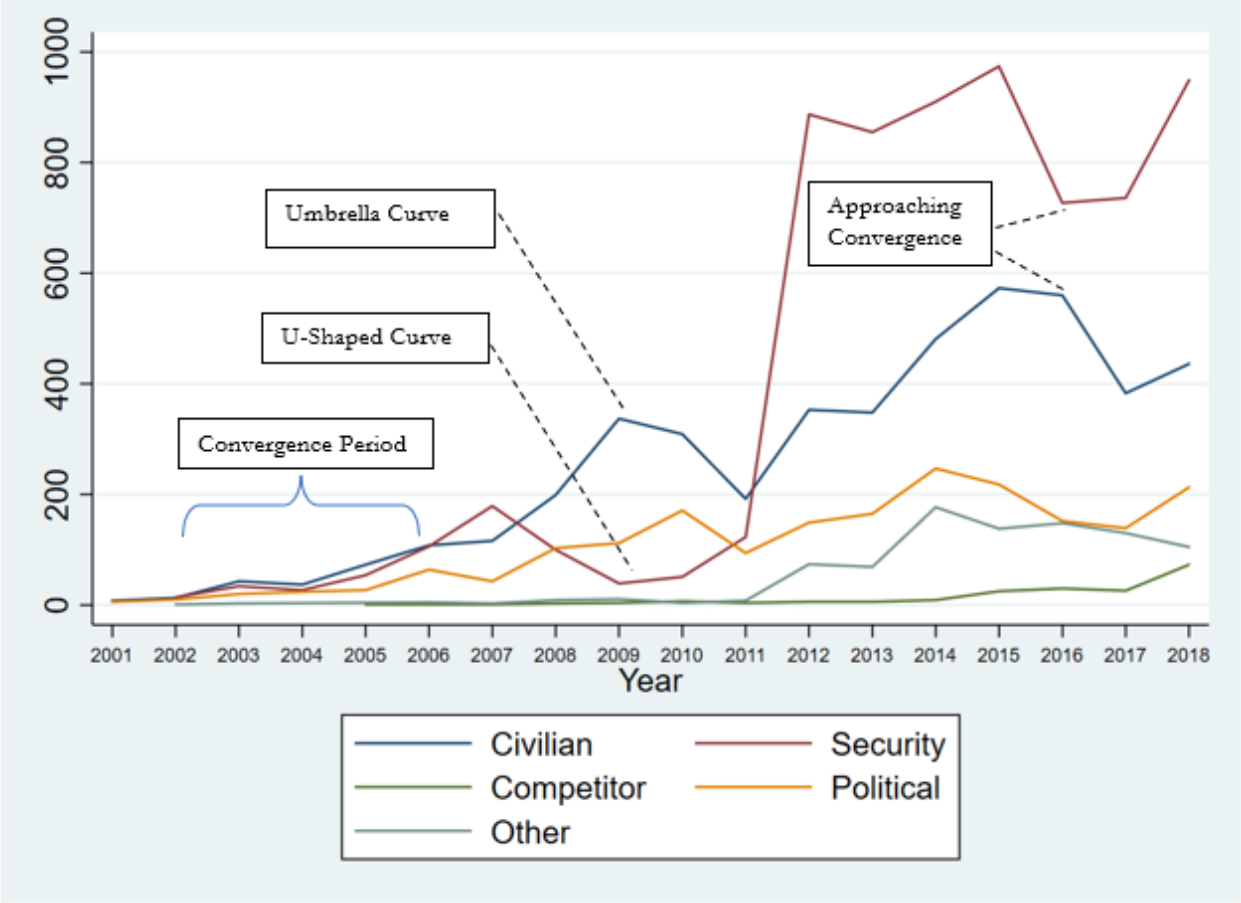
Target Type	**Count**	**Percentage**	**Target Type**	**Count**	**Percentage**
Airports & Aircraft	56	0.39%	Police	4149	28.87%
Business	498	3.47%	Private Citizens & Property	2885	20.08%
Educational Institution	355	2.47%	Religious Figures/Institutions	251	1.75%
Food or Water Supply	14	0.10%	Telecommunication	79	0.55%
Government (Diplomatic)	143	1.00%	Terrorists/Non-State Militia	173	1.20%
Government (General)	1814	12.62%	Tourists	3	0.02%
Journalists & Media	84	0.58%	Transportation	162	1.13%
Maritime	1	0.01%	Unknown	859	5.98%
Military	2616	18.20%	Utilities	41	0.29%
NGO	158	1.10%	Violent Political Party	22	0.15%
Other	8	0.06%	**Grand Total**	**14371**	**100.00%**

Table 38: Afghanistan 2001 – 2018 Target Types Attacked (Condensed)

Target Type	Count	Percentage
Civilian	4,569	31.79
Security	6,765	47.07
Competitor	195	1.36
Political	1,957	13.62
Other	885	6.16
Total	14,371	100

Note: The condensed table consists of the following reduction principle: **Civilians** = Airports and Aircraft, Business, Educational Institution, Journalists & Media, NGO, Private Citizens & Property, Religious Figures/Institutions, Telecommunication, Transportation, and Utilities. **Security** = military and police. **Competitor** = Terrorists/Non-State Militia and Violent Political Party. **Political** = Government (Diplomatic & General). **Other/Unknown** = Other & Unknown.

Graph 17: Afghanistan 2001 – 2018 Target Types Attacked Over Time (N = 14,371)



Data Analysis: The above tables and graph indicate the types of targets being attacked by both suicide and non-suicide bombing during the given period, 2001 – 2018, in Afghanistan. In looking at target sets, it appears the period between 2002 and 2006 were indistinguishable, as a convergence (represented by a bracket) among them was patent. Then, a crossover point was reached in 2007, for which security targets became slightly more prominent. This was followed by a four-year (2008 – 2011) divergence in which terrorism was prominent and guerrilla warfare was less so. The trend curve for security targeting was U-shaped, whereas the civilian targeting trend curve was umbrella-shaped (represented by dotted lines). However, during 2012 a major shift in targeting occurred, in which a clear preference for security targets emerged and persisted.

While security and civilian targeting rose and fell together during the next four-year period (2012 to 2015), during 2016 an interesting circumstance became apparent. Security targeting dropped and civilian targeting remained basically consistent, so that the two came closer to a convergence (represented by dotted lines). During 2017 – 2018, however, they diverged again. The major finding here is that non-state violence exhibited a pattern in which civilian targeting (terrorism) was emphasized for a period of four years, followed by a year in which the target sets received nearly identical treatment. The next four years demonstrated a focus on security targeting (guerrilla warfare), during which civilian targeting (terrorism) coincided. This was then followed by a similar (less pronounced) convergence for a year when instances of security targeting began to come closer to civilian targeting. Then a divergence resumed and security targeting climbed steeply.

The above finding suggests that some targeting decisions may have been believed to be working in different ways at different times. To better understand what was occurring on the

ground, the following tables show who the actors were and to what degree they held a market share of the violence. The above tables and charts show what was being attacked, whereas the next couple of tables will show who was attacking, which will be followed by a depiction of how the violence was being carried out, particularly with respect to suicide bombings.

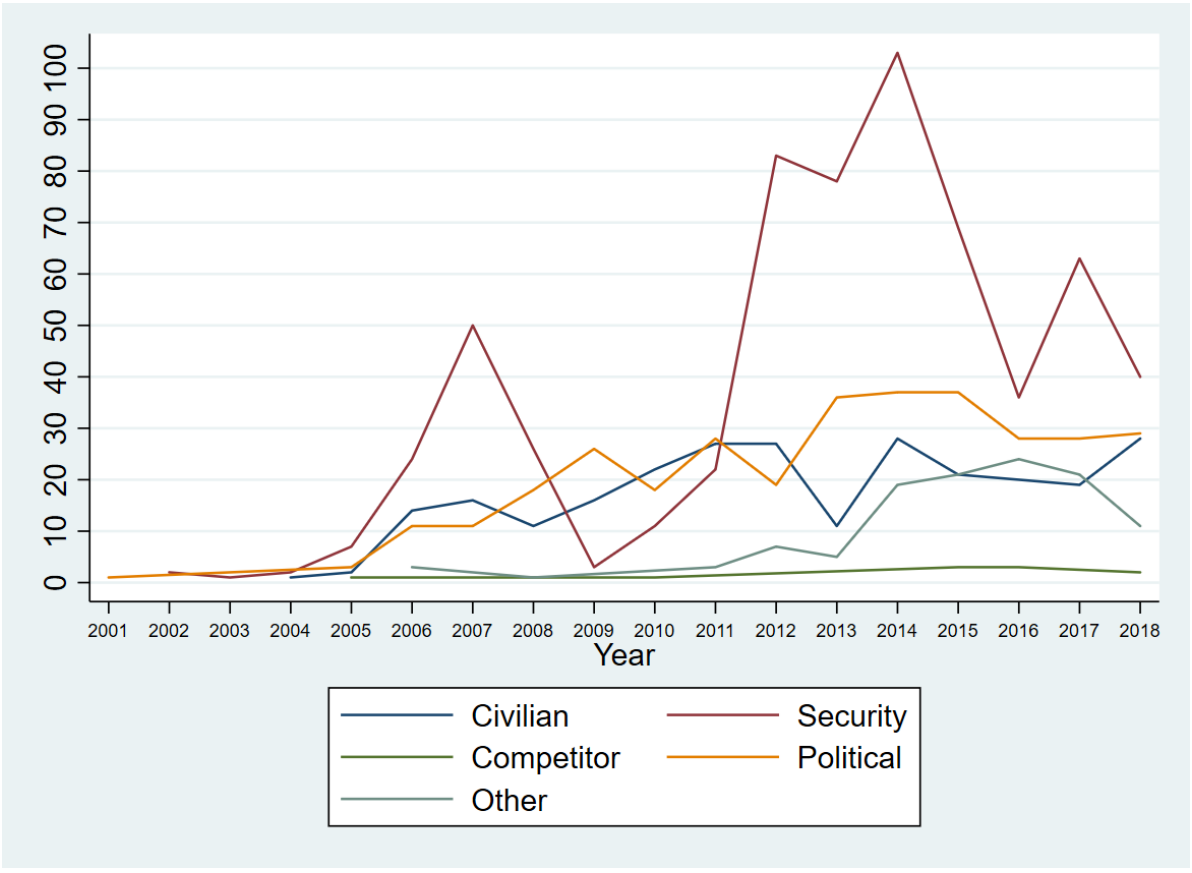
Table 39: Non-state Groups Attacking with Suicide and Non-suicide Bombing in Afghanistan 2001 – 2018 by Target Type (N = 14,371)

Group/Target Type	Civilian	Security	Competitor	Political	Other	Total	Percentage
Al-Fatah	0	0	0	1	0	1	0.01
Al-Qaida	10	3	0	7	0	20	0.14
Anti-United States ..	0	2	0	0	0	2	0.01
Gholam Yahya Akbar	1	0	0	0	0	1	0.01
Gunmen	3	4	0	2	0	9	0.06
Haji Fateh	1	0	0	0	0	1	0.01
Haqqani Network	23	25	0	27	10	85	0.59
Hizb-I-Islami	12	18	0	5	2	37	0.26
Insurgents	1	2	0	0	0	3	0.02
Islamic Movement of Uzbekistan (IMU)	2	0	0	0	0	2	0.01
Islamist extremists	1	0	0	1	0	2	0.01
Jaish al-Muslimin (Army of the Muslims)	1	0	0	1	0	2	0.01
Jaish-e-Mohammad (JeM)	0	0	0	1	0	1	0.01
Jundallah (Pakistan)	0	0	0	0	1	1	0.01
Khorasan Chapter of the Islamic State	152	122	13	54	16	357	2.48
Khorasan jihadi group	2	0	0	0	0	2	0.01
Lashkar-e-Jhangvi	2	0	0	0	0	2	0.01
Lashkar-e-Taiba (LeT)	0	0	0	1	1	2	0.01
Mahaz Fedai Tahrik Islami Afghanistan	2	1	0	2	0	5	0.03
Militants	3	0	0	0	1	4	0.03
Mullah Dadullah Front	0	0	0	0	1	1	0.01
Muslim extremists	2	1	0	0	0	3	0.02
Opposition Group	2	0	0	3	0	5	0.03
Saif-ul-Muslimeen	0	1	0	0	0	1	0.01
Taliban	2,363	4,763	136	1,106	299	8,667	60.31
Tehrik-i-Taliban Pakistan (TTP)	2	7	0	4	2	15	0.1
Tela Mohammed	1	0	0	0	0	1	0.01
Unknown	1,983	1,816	46	742	552	5,139	35.76
Total	**4,569**	**6,765**	**195**	**1,957**	**885**	**14,371**	**100**

Table 40: Groups Using Suicide Bombing in Afghanistan 2001 – 2018 (N = 1,339)

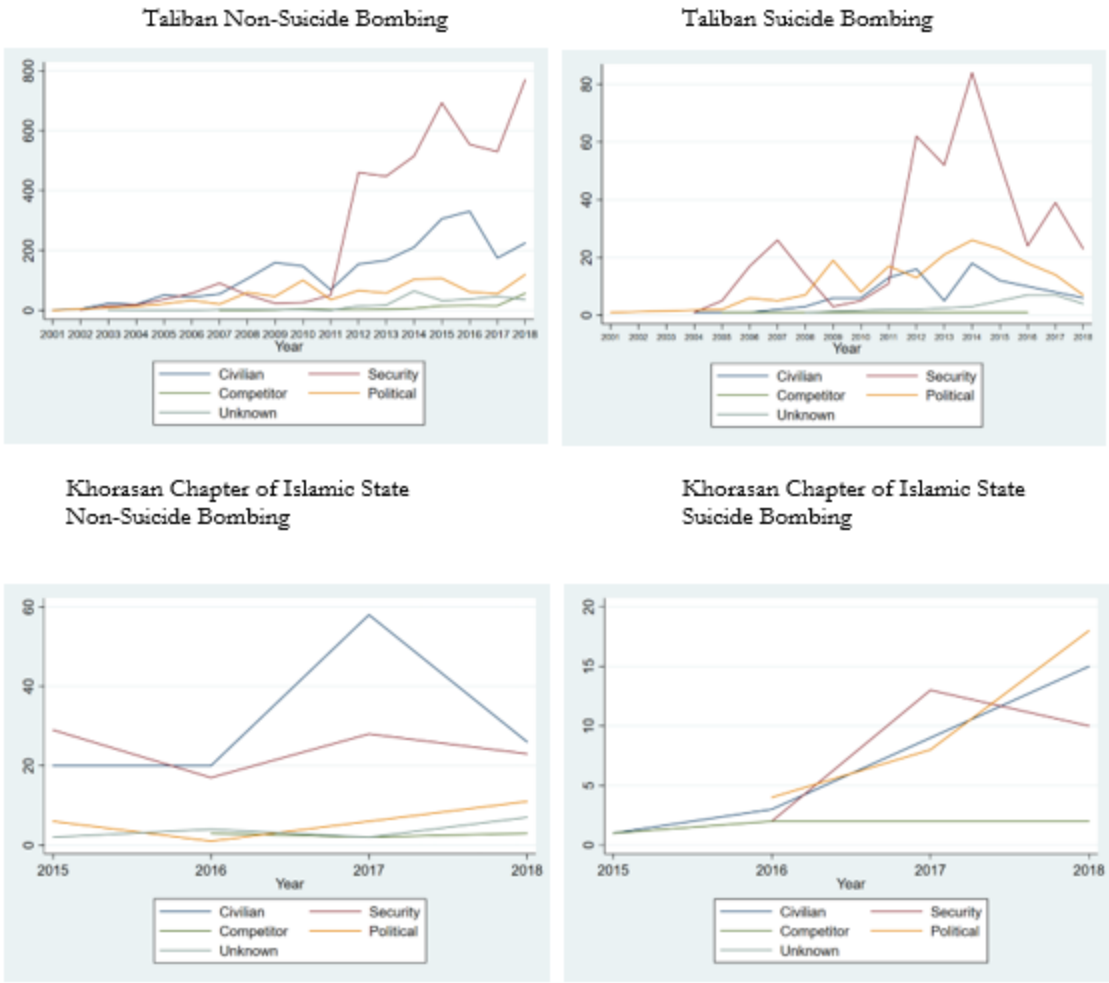
Group/Target Type	Civilian	Security	Competitor	Political	Other	Total	Percentage
Al-Qaida	1	1	0	1	0	3	0.22
Haqqani Network	14	15	0	15	7	51	3.81
Hizb-I-Islami	1	3	0	0	0	4	0.30
Islamic Movement of Uzbekistan (IMU)	1	0	0	0	0	1	0.07
Khorasan Chapter of the Islamic State	28	25	5	30	1	89	6.65
Lashkar-e-Jhangvi	1	0	0	0	0	1	0.07
Lashkar-e-Taiba (LeT)	0	0	0	1	1	2	0.15
Mullah Dadullah Front	0	0	0	0	1	1	0.07
Taliban	107	419	4	187	31	748	55.86
Tehrik-i-Taliban Pakistan (TTP)	0	0	0	2	0	2	0.15
Unknown	110	157	2	94	74	437	32.64
Total	**263**	**620**	**11**	**330**	**115**	**1,339**	**100.00**

Graph 18: Suicide Bombings in Afghanistan 2001 – 2018 by Target Type and Year (N = 1,339)

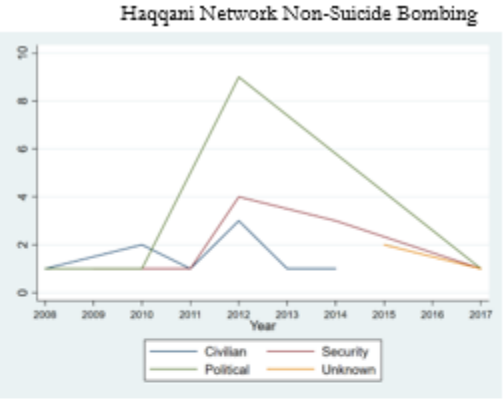


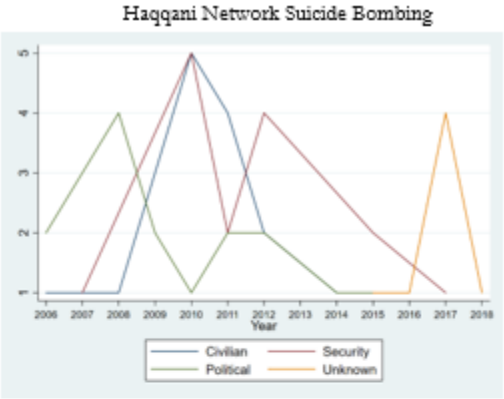
Data Analysis: Setting aside the "unknown" attackers, the tables above indicate that the main (identified) non-state violent actors were, in rank-descending order, (1) the Taliban: 8,667 attacks (60.31% of the total), (2) the Khorasan Chapter of the Islamic State: 357 attacks (2.48% of the total), (3) the Haqqani Network: 85 attacks (.59% of the total), (4) Hizb-I-Islami: 37 attacks (.26% of the total), (5) al-Qaida: 20 attacks (.14 % of the total), and (6) Tehrik-i-Taliban Pakistan (TTP): 15 attacks (.1% of the total). Each of the top violence practitioners' attacking preferences over time can be viewed in the following tables and charts.

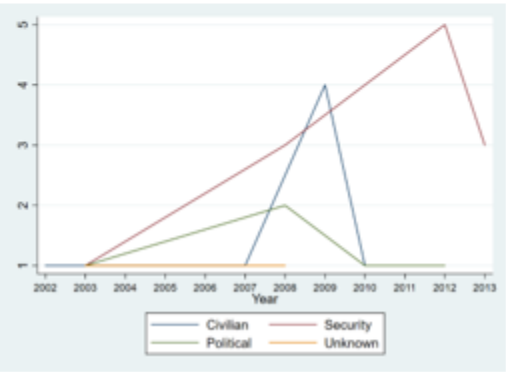
Graph 19: Comparing Taliban & IS Suicide Bombing and Non-Suicide Bombing in Afghanistan

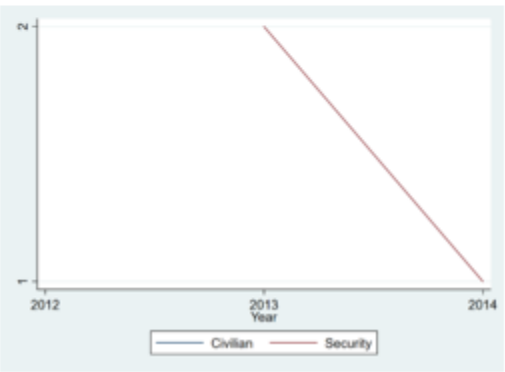


Graph 20: Haqqani Network and Hizb-I-Islami Suicide Bombing and Non-Suicide Bombing



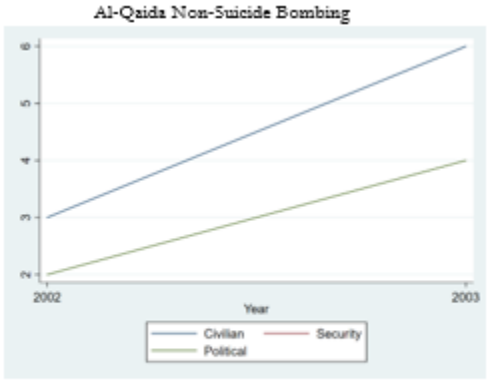






Note: There was one civilian attack in 2012, which does not produce a line on the graph.

Graph 21: AQ Non-Suicide Bombing



Note: There were 2 security attacks in 2002, which do not produce a line on the graph.

Table 41: Al-Qa'ida Suicide Bombing

Al-Qaida Suicide Bombing

Year	Target Type	Count
2003	Security	1
2005	Civilian	1
2006	Political	1

Note: Given the paucity of attacks, the above table format was chosen.

Table 42: TTP Non-Suicide Bombing

Target Type/Year	2008	2010	2011	2012	2013	2014	2017	Total
Civilian	1	0	1	0	0	0	0	2
Security	0	1	0	1	1	3	1	7
Political	0	0	0	1	0	0	1	2
Unknown	0	0	0	1	0	0	1	2
Total	**1**	**1**	**1**	**3**	**1**	**3**	**3**	**13**

Table 43: TTP Suicide Bombing

Year	Target Type	Count
2014	Political	1
2015	Political	1

Data Analysis: The above graphs and tables enable one to compare the use of suicide bombing with attacks in which it was not used. This is accomplished by collapsing the targets into five target sets (including "unknown" targets) and displaying their use along the given years during which the entities were attacking. Not all target sets appear for each, as not every group attacked all five sets.

As was noted above, there were two periods (pre-2012 and 2012 – 2018) for which the data demonstrate a major shift in violence and targeting. The main entity that was known to be attacking during the entirety of the period under consideration was the Taliban. In terms of non-suicide bombing attacks, they seemed to have generally prioritized attacking civilians during the pre-2012 period, and especially during 2008 – 2009. A very pronounced lull occurred in 2011, but after that civilian targeting rose and fell along similar lines as security targeting. The 2012 – 2018 period was different, however, in that the emphasis for non-suicide bombing was placed on security targets.

Regarding the Taliban's suicide bombing campaign, security targets were preferred overall, with a clear spike being visible from 2006 – 2008 during the pre-2012 period and major

prioritization from 2012 onward. Political targets tended to be rather important as well. They were the dominant target class from 2008 (especially) through 2011 and they were typically more prominent than civilian targeting. The peak period of political targeting was 2013 – 2016. For civilian targeting, a rise was apparent from about 2008 to around 2012, dropping off around 2013, climbing back to its highest level in 2014, then slowly diminishing after that.

Competitors were not regularly targeted by suicide bombing, except on four occasions. For instance, during 2005, a twin BBIED suicide bombing was unleashed on a warlord (Shah Agha) who had shown support for the U.S.-backed government. In 2008, an anti-Taliban militia leader (Abdul Hakim Jan) was targeted by a very lethal attack (more than 100 killed) with a BBIED. During 2015, members of a pro-government (Arbaki) militia were struck with an SVBIED and during 2016 a non-state militia commander (Khan Jan) was hit with a BBIED. Thus, it can be said that the Taliban preferred to use suicide bombing rather sparingly when targeting competitors.

The Khorasan Chapter of the Islamic State began attacking inside Afghanistan during 2015. For non-suicide bombing, there was a slight penchant to attack security targets during 2015, a generally consistent inclination to attack civilian targets during 2016, followed by a rise in both types of targeting during 2017. However, during that rise, civilian targets were most prominent. As both civilian and security targets began to diminish during 2018, political targets gained traction (a trend that began in 2017). Although fewer attacks (n = 8) were carried out against competitors, the trend was that during 2016 three attacks were aimed at a militia movement (National Uprising Movement), then two attacks were made against the Taliban during 2017 and early 2018, while Hizb-I-Islami Gulbuddin (HIG) was struck a month later, followed by the Taliban four months later.

When the group used suicide bombing, it distributed the practice fairly evenly during 2015 – 2016, but 2017 produced a rise in security, civilian, and political targeting. During 2018, political targets were most prominent, followed by civilian and then security targeting. Regarding the targeting of competitors, Islamic State targeted a couple of senior Taliban commanders once in 2015 and a group of Taliban members once in 2018. Interestingly, they targeted militia leaders (including anti-Taliban leaders) twice during 2016 and once during 2018.

For the remaining organizations, the trend lines are supported by fewer data points, such that generalizations are more difficult to make. However, there are some patterns to which I will call attention. For instance, the Haqqani Network did most of their non-suicide bombing targeting against political targets, and mainly in 2012 (n = 9, but for which there were also 4 security and 3 civilian targets). When they used suicide bombing, it was initially aimed at political targets during 2006 – 2008, but during 2010 the group mainly attacked both security and civilian targets. Interestingly, during 2012, security targets became the clear priority for the next several years, until 2017, while civilian targets ceased to be of interest. That year, the dataset indicates 4 unknown targets were struck, but what actually happened was that all of them were foiled attacks in which the bombers were intercepted. In fact, this was the case for all of the unknown Haqqani Network attacks (n = 7). Haqqani Network suicide bombing effectively ceased during 2017, according to the GTD.

For Hizb-i-Islami, one interesting observation is that although they attacked with non-suicide bombing techniques from 2002 through 2013, they conducted 4 suicide bombings within a span of four years: once in 2012 against a transport bus with unknown passengers, twice in 2013 and once in 2014 against NATO convoys. The latter three targets were clearly security related and had

they occurred at a greater scale one might be able to make the case that suicide bombing is a response to occupation. However, what would cloud that assertion is that the 2012 bus attack (by a female) was against foreigners and was specifically claimed as vengeance for a film ("Innocence of Muslims"), which occurred a week after the September 11, 2012, attack on U.S. personnel in Benghazi, Libya.[2] Furthermore, their suicide bombing campaign appears to have begun in 2012 and ceased in 2014. The U.S.-led NATO occupation, of course, existed prior to and after that period.

Al-Qaida conducted a range of non-suicide bombing attacks between 2002 and 2003. During both years, their targeting preferences were rather disparate. No clear pattern could be discerned by looking at target types, except to say that they had an overall preference for civilian targets, followed by political targets. However, it did appear that Jalalabad and Kandahar were locations they favored attacking. As for suicide bombing, AQ attacked on three occasions, two of which lay beyond their non-suicide bombing campaign. In 2003, they attacked a security target (German NATO soldiers); in 2005, they attacked civilians (a funeral at a mosque); in 2006 they attacked a political target (a provincial governor).

The TTP's non-suicide bombing attacks between 2008 and 2017 appeared to exhibit a preference for security targets. In looking closer at the data, one non-suicide event was a foiled 1,000 Kg SVBIED (truck bomb) and the other was a failed attack, that featured a prematurely detonated IED that killed a TTP leader. In the suicide bombing category, there were two foiled BBIED attacks against political targets, resulting in the arrest of the perpetrators.

[2] See "Hezb-i-Islami claims Kabul suicide attack to avenge film." *Hindustan Times/AFP*, September 18, 2012.

Cut Two: ACLED DATA

As in previous chapters, the GTD tends to lag significantly behind ACLED in terms of its updated publication of data. For instance, by August 2020, the GTD hadn't yet published through 2019, but ACLED had published through to that month. Again, I'm looking at some ACLED data that overlaps with GTD data, but also some that temporally exceeds it. In this case, the data I analyze for Afghanistan will cover three years: 2017 – 2019 (n = 41,441).

Descriptive Statistical Analysis of ACLED Data in Afghanistan[3]

Prior to any modifications, ACLED data indicate that there were 201 suicide bombing attacks from 2017 – 2019. After implementing the additional coding rules, described in the appendix, the potential count then rose to 756. However, after having applied my uniquely created removal/retention process, the final number consisted of 297 (capturing 48% more suicide bombing incidents than ACLED itself had coded as such), roughly consisting of 426 suicide bombers. This can be compared to the GTD data (enumerated above) which counts 131 suicide bombings in 2017 and 110 in 2018 (2019 had not yet been published). As a matter of gauging the internal validity of my ACLED data coding exercise, I ended up with the following count: 134 in 2017, 102 in 2018, and 61 in 2019.

A Glance at Non-Suicide Bombing Data

Of the 41,444 incidents, ACLED listed 11,766 as being "explosions/remote violence." Discounting "air/drone strike" and "suicide bomb" the number is 7,216. In my sample set (n =756) I noticed that not only were IEDs used rather frequently, but magnetic and sticky bombs were

[3] Note that I include the Arbaki pro-government militia under the heading of "security" forces, which is similar to the way I coded the PMU in Iraq. My treatment is consistent with ACLED's own coding rules for Afghanistan, which are outlined in a document called "ACLED Methodology and Coding Decisions around the Conflict in Afghanistan."

commonly placed on others' vehicles. This is similar to what I had encountered in the Iraq data. The conclusion to be drawn is that not only are explosions a preferred means of attacking, but the use of attached ordnance indicates a desire for precision. This would imply that suicide bombing is not the only "smart bomb" tactic, but one among many. There is clearly something more to suicide bombing that needs to be explained.

Suicide Bombing Data

Table 44: ACLED Suicide Bombing Descriptive Statistics for Afghanistan, 2017 – 2019

Attacker	**Count**
Islamic State (Afghanistan)	55
Military Forces of Afghanistan (2014-) Special Forces	1
Mutiny of Taliban	1
Taliban	97
Taliban and/or Islamic State (Afghanistan)	1
Unidentified Armed Group (Afghanistan)	46
Grand Total	**201**

Table 45: ACLED Suicide Bombing Descriptive Statistics for Afghanistan, 2017 – 2019 (Re-Coded)

Attacker	**Count**
AQIS	1
Haqqani	2
IS	68
Taliban	145
Taliban/IS	1
Unknown	80
Grand Total	**297**

Data Analysis: The above two tables show ACLED's original data for suicide bombing events (n = 201) and how it differed with the data I identified (n = 297) in Afghanistan from 2017 – 2019. In either case, the overwhelming share of known entities committing the acts were assigned to the

Taliban (ACLED = 97 or 48% versus my count = 145, or 49%), followed by Islamic State (ACLED = 55 or 27% versus my count = 68 or 23%). ACLED was unable to identify the attacker on 46 occasions (23%), whereas I was unable to do so on 80 occasions (27%).

There was one instance in which ACLED's coders indicated both Taliban and IS claimed a suicide attack, for which I was similarly agnostic in attributing the attack definitively to either entity. The AQIS (al Qa'ida in the Indian Subcontinent) event was foiled by the Afghan Air Force, in which 9 suicide bombers were killed. I found that there were two Haqqani Network incidents, which were both foiled in April, 2017. Consistent with my finding from the GTD, the group was stopped a few times and ceased the practice of suicide bombing in 2017. One can only speculate if they were being infiltrated by intelligence services or a rival entity, or whether they simply decided it wasn't worth it for them. In any case, the cessation may represent a tactical change, or simply a lull for the time being.

My investigation of the data also enabled me to observe that foiled attacks (n = 49 or 16%) were rather common, but failed attacks were not (n = 9 or 3%). An interesting finding had to do with how few times an entity attacked a competitor with suicide bombing (n = 6). IS attacked the Taliban on two, possibly three, occasions. There were also two events in which an intra-Taliban rivalry led to suicide bombing attacks on each other. These sorts of events tend to undermine the notion that the practice is reserved for use against foreign entities, or are somehow confined to inter-sectarian targets. Indeed, there were at least a dozen suicide bombing attacks against mosques and several more against religious services (weddings, funerals, cultural events, or shrines). A number of these attacks featured both Sunni and Shi'a targets.

Table 46: ACLED Data for Suicide Bombings in Afghanistan, 2017 – 2019

Year	Count of Suicide bombings
2017	95
2018	70
2019	36
Grand Total	**201**

Table 47: ACLED Re-Coded Data for Suicide Bombings in Afghanistan, 2017 – 2019

Year	Count of Suicide Bombings	Number of Bombers Used
2017	134	217
2018	102	121
2019	61	88
Grand Total	**297**	**426**

Data Analysis: It is clear from the data that both the number of suicide bombings and the number of individual bombers had diminished over the course of time and recoding the data makes that more poignant. Additionally, one can better see that the ratio of bombers to attacks fluctuated somewhat.[4] The general ratio of bombers was 1.6:1 in 2017, 1.9:1 in 2018, and 1.4:1 in 2019. On average, there were less than 2 suicide bombers allocated to any given attack. This is different than in Iraq, where the ratio always exceeded 2:1.

Below are some data-driven expressions of the Afghanistan battlespace, which explore the relationship between the use of suicide bombing and a variety of coded variables. The data appear in ways that are similar to its display in the accompanying chapters.

[4] Note that ACLED itself does not count the number of suicide bombers. It is an operation unique to my analysis.

Table 48: Enhanced ACLED Data - Coding Suicide Bombing Targets by Battlefield Conditions

Target Type/Sub Event Type	Air/drone strike	Armed clash	Attack	Disrupted weapons use	Government regains territory	Remote explosive/landmine/IED	Shelling/artillery/missile attack	Suicide bomb	Grand Total
Civilian		10		1		2		51	64
Competitor								6	6
Political		8	1	2				16	27
Security		36		2	1		1	120	160
Unknown	8	15		13				4	40
Grand Total	**8**	**69**	**1**	**18**	**1**	**2**	**1**	**197**	**297**

Note: The columns were derived directly from ACLED data, but I created the rows by going a step further in my disaggregation process, which was developed from embedded narratives (supplied by ACLED).

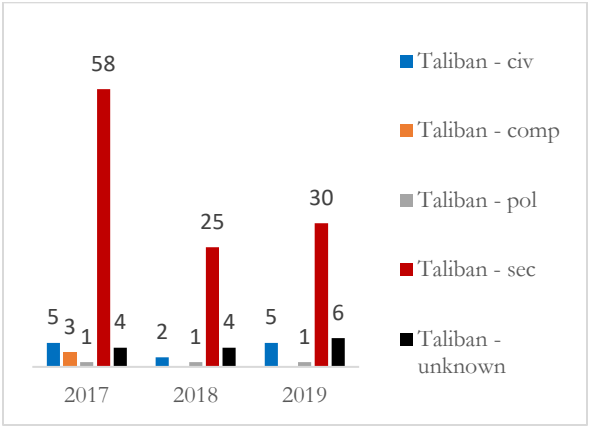
Data Analysis: The above table demonstrates how ACLED's focus on "suicide bombing" as a stand-alone category enabled its coders to miss significant uses of the practice. Namely, suicide bombing was used quite regularly during armed clashes (n = 69). This was especially so, where security targets dominated the target set, followed by civilians, then political targets ("unknown" targets were foiled/failed). The table shows that disaggregating target types, based on the dataset's existing narratives, is a viable path for better understanding how violence is applied by non-state actors.

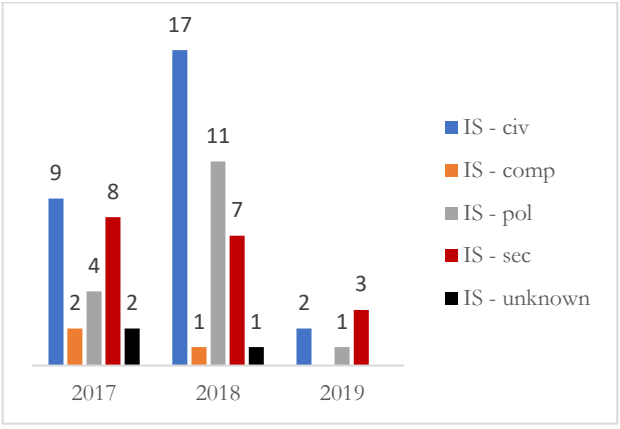
The specific findings of the above descriptive statistics are that there is a clear bias toward using suicide bombings against both the incumbent regime and its supporters (pro-government militias). Indeed, 160 out of 297 (54%) suicide bombings were against security targets, and of that

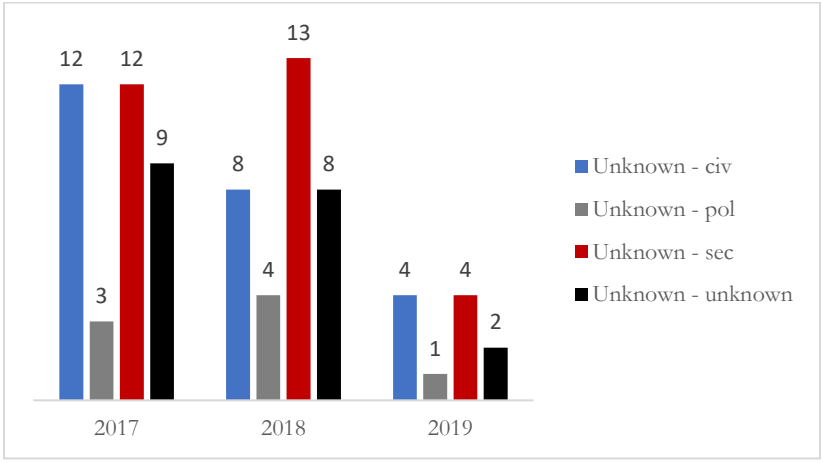
number 36 (23%) occurred during armed clashes. One difference in the way I looked at Afghanistan versus other battlespaces was that I used the PCT value to indicate whether foreign (NATO) forces were being attacked. That is because the narratives mainly mentioned NATO and did not indicate whether the units were supplemented with local Afghan forces. Luckily, ACLED indicated whether NATO was a party to an attack (listed as "actor 2"), so I was able to see that its forces were attacked on 26 occasions by suicide bombers. That isn't necessarily a small number, but when juxtaposed with the totality of suicide bombing incidents (n = 297), or even against all security targets (n = 160) it seems not to have been a main target in general nor was it specifically *the* main security target.

Given that occupying NATO forces were not targeted more than other security targets, it is possible to make the statement that occupation itself does not necessarily generate suicide bombing activity. It seems more appropriate to say that when it comes to suicide bombing against security targets, the main targets tend to be incumbent-centric, but not exclusively so. This might be due to the regime's greater presence, and possibly a weaker system of defenses. That is, among the hard targets, NATO forces likely tend to be the hardest to approach and penetrate, whereas the regime's elements are less well equipped. Having said that, I produced the below tables as a means to explicate which groups were attacking what types of targets.

Chart 4: Suicide Bombing Groups by Name, Target Type and Year (2017 – 2018)







Data Analysis: Focusing mainly on the Taliban and IS,[5] the above charts demonstrate that the Taliban exercised a prerogative for security targets during the given period and avoided political targets. IS preferred civilian targets during 2017 and 2018, security targets in 2019 (by a small margin), and political entities; especially during 2018. The distinction reveals that although both groups used suicide bombing, they varied the way they allocated their resources. Consistent with the findings in the other chapters, suicide bombing is not applied the same way by all groups at all times. This

[5] As with actions in other combat theaters, the "unknown" attackers are either unclaimed or unable to be attributed with confidence. Although preferences can be seen, the anonymity of the attackers makes it difficult to conclude any group-oriented behavior is discernible.

finding strengthens the notion that even within the same theater, facing similar threats, different entities will choose to attack certain types of targets that comport with their own objectives.

Beyond the above descriptive statistics and my subsequent interpretation, I investigated the data in an inferential manner. Below are hypotheses that mirror what were put forth in the Syria and Iraq chapters. Each one considers the relationship between the four variables that I created: PCT, Number of Bombers, Combined Arms, and Vehicular. Again, The null hypothesis, H(0), that was tested in each case is that there is no relationship between any of the given variables, whereas the alternative hypotheses I tested were as follows.

Ha(1): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and the number of bombers used to attack it.

Ha(2): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether combined arms are used to attack it.

Ha(3): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether a vehicle is used to attack it.

Ha(4): I expect there to be a relationship between the use of combined arms and the number of suicide bombers used to attack a target.

Ha(5): I expect there to be a relationship between the number of suicide bombers and whether a vehicle was used.

Ha(6): I expect there to be relationship between the use of vehicles and whether combined arms were used to carry out a suicide bombing.

Table 49: Pearson's Correlation Coefficient for PCT, Number of Bombers, Combined Arms and Vehicular

Variable	Mean	Std. Dev.	Min	Max
PCT	1.615686	1.223679	0	4
Number of Bombers	1.313725	1.059085	1	11
Combined Arms	0.2470588	0.4321494	0	1
Vehicular	0.3333333	0.4723316	0	1

	PCT	Number of Bombers	Combined Arms	Vehicular
PCT	1			
Number of Bombers	-0.022	1		
Combined Arms	-0.0803	0.3891	1	
Vehicular	0.3247	-0.1233	-0.0579	1

Data Analysis: PCT and Number of Bombers are interval variables, where PCT consists of 5 possible values (Min = 0 – Max = 4) and Number of Bombers 11 (Min = 1 – Max = 11), with a range of measurement being -1 to 1. Combined Arms and Vehicular are dichotomous variables, where they each have 2 possible values (Min = 0 and Max = 1) and have a range of measurement between 0 and 1. Setting aside the top table (mean and standard deviation), which was explained in the chapter on Syria, the second table (with correlation coefficients) provides the results of the following hypothesis tests.

Ha(1): We cannot reject the null hypothesis that there is no relationship between the PCT value and the number of suicide bombers that attacked the target. The relationship is negative, but insignificant (r = -.022). This finding would indicate that the threat value of a potential target for suicide bombing might not be a factor for insurgents who were considering whether to attack or save their resources for a more worthy target. One explanation for this finding might be that the overarching aim of attacking higher threat targets has less to do with winning a battle and more to do with grinding down the enemy through an attrition strategy. The somewhat limited supply of suicide bombers might also explain some of this as well. A better means of investigating this finding is to look at each organization separately to see which target sets are allocated what number of bombers.

Ha(2): We cannot reject the null hypothesis that there is no relationship between the PCT value and whether combined arms were used in a suicide bombing attack. The relationship is negative, but insignificant (r = -.0803). This finding might be interpreted to mean that combined arms, via suicide bombing, are not a regular attack mode against an enemy that would be expected to possess greater advantages. If anything, there is some indication that one-off attacks are preferred against higher threats. Again, this should be considered alongside an organizationally specific assessment of targeting preferences.

Ha(3): We can reject the null hypothesis that there is no relationship between the PCT value and whether a vehicle was used in a suicide bombing attack, while accepting the alternative hypothesis. The relationship is positively signed and it is of medium significance (r = .3247). This finding would indicate that the degree of threat posed by an entity targeted for a suicide bomb attack is relevant for considering whether vehicles were used.

Ha(4): We can reject the null hypothesis that there is no relationship between the use of combined arms and the number of suicide bombers attacking a target (r = .3891). We can accept the alternative hypothesis, which is positively signed and for which its significance is medium. This finding seems to imply that there is a propensity to enhance a sophisticated coordination attack (combined arms) with a force multiplicative effort (more suicide bombers). As a matter of cautious interpretation, many of the incidents in which more than one suicide bomber took action were coded as combined arms assaults. However, less than a quarter (69 out of 297 events) consisted of combined arms attacks and of that number 41 featured more than one suicide bomber.

H(a)5: We can reject the null hypothesis that there is no relationship between the number of suicide bombers and the use of vehicles. The alternative hypothesis, which is negatively signed (r = -.1233), indicates that where multiple suicide bombers are used, there is less of a chance that vehicles would

be. It is therefore likely an infantry phenomenon and not necessarily one that is enhanced by precision vehicular (suicide) munitions.

Ha(6): We cannot reject the null hypothesis that there is no relationship between the use of vehicles and whether a combined arms assault was used for a suicide bombing attack. The relationship is negatively signed (r = -.0579), but does not meet the significance threshold. This finding indicates that where a combined arms assault was used for a suicide bombing attack, the propensity for vehicles to be involved could have decreased, but not in a statistically significant way. This might mean that one acted as a substitute for the other, or that I might be tapping another phenomenon (e.g., urban versus rural targets).

Given the results of Ha(5) and Ha(6), I investigated when vehicles were most commonly used. The following table illustrates my findings.

Table 50: SVBIEDs in Afghanistan (2017 – 2018) by Combined Arms and Target Type

Target Types	No Combined Arms	Combined Arms	Total
Civilian	9	1	10
Competitor	1	0	1
Political	1	3	4
Security	56	14	70
Unknown	8	1	9
Total	75	19	94

Vehicles were used in 32% of suicide bombing attacks (94 out of 297). When juxtaposed to the combined arms data, they were used 20% of the time (19 out of 94) that SVBIEDs were part of an attack arsenal. As the above table indicates, when SVBIEDs were used as part of a combined arms operation, the bias was primarily against security targets. In organizational terms, the Taliban

was the most common practitioner to employ SVBIEDs in general (69 out of 94 SVBIEDS, or 73%) and heavily relied on it as part of its suicide bombing arsenal (69 out of 145 suicide bombings, or 48%). During the suicide bombing attacks it launched against security targets, the Taliban chose to use an SVBIED about half the time (56 out of 113), and of that number the group employed it as a tool of combined arms warfare on thirteen occasions (out of the fourteen shown in the above table).

IS used SVBIEDs sparingly. Of the 68 suicide bombing attacks it conducted, only 5 (7%) employed an SVBIED as part of its suicide attack arsenal. Although this number makes generalizations difficult, it is noteworthy that they featured it as part of a combined arms approach on 3 occasions. In two of those instances, the target was political and in another it was a security element. Given IS's propensity to emphasize political targets more than most others, this might be evidence of an inclination to be more concerned with message amplification. This is in contrast to the Taliban's apparent desire to win battles against the state.

The Efficacy of Suicide Bombing: The Implication of Foiled Attacks: GTD and ACLED Data

Table 51: Rate of Success for All Suicide Bombings in Afghanistan (2001 – 2018) GTD Data

Success/Year	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
Unsuccessful					2	3		6	6	9	11	25	17	36	41	44	40	21	**261**
Successful	1	2	1	3	11	49	77	51	39	43	69	111	113	151	110	67	91	89	**1078**
Total	**1**	**2**	**1**	**3**	**13**	**52**	**77**	**57**	**45**	**52**	**80**	**136**	**130**	**187**	**151**	**111**	**131**	**110**	**1339**
% Success Rate	100	100	100	100	84.6	94.2	100	89.5	86.7	82.7	86.3	81.6	86.9	80.8	72.9	60.4	69.5	80.9	**80.5**

Table 52: Rate of Success for Taliban Suicide Bombings in Afghanistan (2001 – 2018) GTD Data

Success/Year	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Unsuccessful			1			2	6	2	3	10	7	9	14	15	11	6	**86**
Successful	1	2	7	24	33	24	22	17	40	83	71	122	80	45	57	34	**662**
Grand Total	**1**	**2**	**8**	**24**	**33**	**26**	**28**	**19**	**43**	**93**	**78**	**131**	**94**	**60**	**68**	**40**	**748**
% Success Rate	100	100	87.5	100	100	92.3	78.6	89.5	93	89.3	91	93.1	85.1	75	83.8	85	**88.5**

Table 53: Rate of Success for Haqqani Network Suicide bombings in Afghanistan (2006 – 2018) GTD Data

Success/Year	2006	2007	2008	2009	2010	2011	2012	2014	2015	2016	2017	2018	Total
Unsuccessful	1		1			1	1	2	3	1	5	1	**16**
Successful	2	1	4	2	11	7	7		1				**35**
Grand Total	**3**	**1**	**5**	**2**	**11**	**8**	**8**	**2**	**4**	**1**	**5**	**1**	**51**
% Success Rate	66.7	100	80	100	100	87.5	87.5	0	25	0	0	0	**68.6**

Table 54: Rate of Success for IS Suicide Bombings in Afghanistan (2001 – 2018) GTD Data

Success/Year	2015	2016	2017	2018	Total
Unsuccessful		3	6	2	11
Successful	2	9	24	43	78
Grand Total	**2**	**12**	**30**	**45**	**89**
% Success Rate	100.00	75.00	80.00	95.56	87.64

Table 55: Rate of Foiled & Failed for All Suicide Bombings in Afghanistan (2016-2019) ACLED Data

Failed or Foiled/Year	2017	2018	2019	Total
Failed	3	3	3	9
Foiled	20	16	13	49
Total Failed & Foiled	23	19	16	58
# Successful Suicide Bombings	111	83	45	239
Total Failed, Foiled & Successful Suicide Bombings	134	102	61	297
% Successful Suicide Bombings	82.84	81.37	73.77	80.47

Table 56: Rate of Foiled & Failed for Taliban Suicide Bombings in Afghanistan (2016-2019) ACLED Data

Failed or Foiled/Year	**2017**	**2018**	**2019**	**Total**
Failed	2	2	2	6
Foiled	5	4	10	19
Total Failed & Foiled	7	6	12	25
# Successful Suicide Bombings	64	26	30	120
Total Failed, Foiled & Successful Suicide Bombings	71	32	42	145
% Successful Suicide Bombings	90.14	81.25	71.43	82.76

Table 57: Rate of Foiled & Failed for IS Suicide Bombings in Afghanistan (2016-2019) ACLED Data

Failed or Foiled/Year	**2017**	**2018**	**2019**	**Total**
Failed		1		1
Foiled	2	1		3
Total Failed & Foiled	2	2	0	4
# Successful Suicide Bombings	23	35	6	64
Total Failed, Foiled & Successful Suicide Bombings	25	37	6	68
% Successful Suicide Bombings	92.00	94.59	100.00	94.12

Data Analysis: The above tables provide some unique insight into the rate of success or failure associated with suicide bombing in Afghanistan. The top (GTD data) table, which considers aggregate suicide bombings for all entities, indicates that the rate of success was fairly high, with the exception of 2016 (60.3%). According to both GTD and ACLED data, this was true for both the Taliban and IS, but not necessarily for the Haqqani Network. GTD data indicate that entity experienced a rocky first year (2006), followed by high success rates (2007 – 2012), but then a very unproductive series of years. It seems they made no efforts in 2013, then made several attempts

during the following years and experienced nearly no success. This finding is certainly in need of further explanation, but on the surface it appears that a few years of poor success rates might be a force for deterring further similar actions. Drawing from the adage concerning insanity being defined as repeating the same action and expecting different results, the Haqqani Network looks to be rather sane in its consideration of the implications of marginal returns.

Comparing the Taliban to IS, it seems the latter experienced more success. However, it is important to note the difference in targeting preferences. For instance, as the graphs above indicate, the Taliban was attacking harder security targets, while IS was more heavily focused on civilian and political targets. Hence, rates of success should be considered alongside the target sets toward which suicide bombing is applied. This would imply that although the Taliban enjoyed a little less success with their pursuit of security targets, their tolerance for failure was probably strengthened by their desired end-state: diminishing the state's capacity to wield power and demonstrating its own ability to match or exceed it.

Concluding Remarks

The forgoing analysis was drawn from two independent data sources, which when looked at separately, generated some interesting findings. The data reveal overall targeting patterns, which are different for suicide versus non-suicide bombing. At the organizational level, there are clear distinctions between insurgent groups and how they tended to wield violence.

In terms of overall insurgent violence in Afghanistan, the GTD data indicate that target preferences went through a metamorphosis. What began as a somewhat equal distribution of target sets for several years, turned into a series of alternating significance for either terrorism or guerrilla

warfare, but which had eventually settled more firmly on the latter. ACLED data, which only cover a three-year span, confirm the security-centric targeting tendency across the board. In general, suicide bombings were slightly more commonly directed against the regime and its internal (armed militia) supporters, whereas NATO forces were targeted less than 10% of the time.

In terms of specific groups' use of violence, whether suicide bombing or not, GTD data indicate that the Taliban tended to alter its targeting behavior over the course of the conflict, but generally matured toward an overall focus on security targets. This suggests that they have been more concerned with threats to their own survival and wearing down their main competition: government forces, but not necessarily NATO forces. In terms of suicide bombing, the Taliban's preference was similar to its non-suicide bombing attacks, in that it exhibited a main preference for security targets. They occasionally elevated political targets above security targets for a certain period (2008 – 2010) and seemed to value political targets more than civilians (a third-tier target set) with regularity. The Taliban used suicide bombing sparingly against competitors, with the exceptions occurring when there was a perceived link to the regime or NATO forces. This security-centric prerogative was confirmed by ACLED data.

According to ACLED data, the Taliban exercised a preference for using SVBIEDs against security targets, with an occasional propensity to combine its use with other attack types. Others did not operate in this way. They also experienced a slightly lower rate of success than IS did, but this may have something to do with the harder targets they chose to attack. They seemed to be more concerned with supplanting the state, even though they attacked across a spectrum of targets.

ACLED data indicate that about half of the suicide bombings in Afghanistan from 2017 – 2019 were conducted by the Taliban, whereas about a quarter were by IS, and another quarter by unknown (more properly unclassified) actors. On occasion, the Taliban used suicide bombing against its own members, IS sometimes used it against the Taliban, and Mosques of both Sunni and Shi'a sectarian affiliation were targeted on a dozen occasions.

The Khorasan Chapter of the Islamic State's (IS) violent behavior is distinguishable from the Taliban's in that IS exercised a preference for using non-suicide bombing attacks against civilians from 2016 through 2018, with security targets tracking in a similar (albeit less prominent) direction. Political targets were of third-tier interest. However, when using suicide bombing, IS's preferences were turned upside down from 2017 to 2018. In 2017, security targets were followed by civilian targets, which were slightly trailed by political targets, but in 2018, political targets were most prominent, followed by civilian targets, and then security targets.

In analyzing the GTD data, one can get a sense that the Taliban's overarching guerrilla warfare style was observable in their suicide bombing approach, rather than their non-suicide bombing approach to violence. The opposite appears to be the case with IS, in that their non-suicide bombing attacks demonstrated a taste for terrorism, as did their suicide bombing attacks. Their proclivity to use suicide bombing against competitors (the Taliban and various militias) exhibit, however, that they desired a more prominent place in the insurgency and saw fit to exercise their dominance against intra-sectarian targets on occasion.

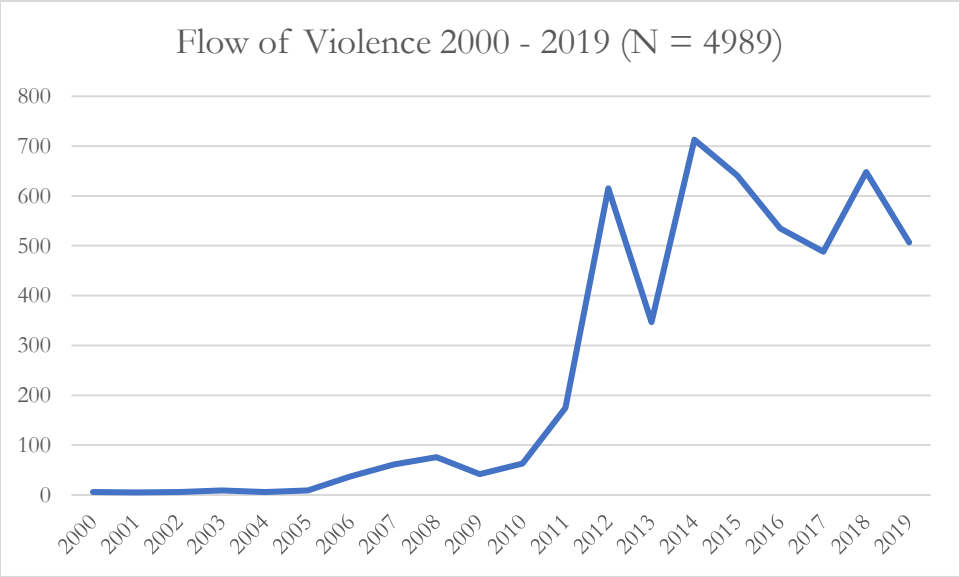
Chapter 8: The Nigeria Battlespace – Balancing Against Security Threats Versus Terrorizing Civilians

This chapter looks at the Nigerian battlespace, between 2000 and 2019. Similar to the previous chapters, I focus on targeting preferences by violent non-state actors who accept suicide bombing as part of their warfighting arsenal. The chapter first considers the insurgent landscape and then narrows the focus to a data analysis of the primary organization that became what appears to be the leader in the suicide bombing space: Boko Haram. As in previous chapters, the available data from the GTD is very different than what is found in ACLED. Consequently, the analyses of each varies substantially.

Cut One- GTD Data

Analysis of Suicide and Non-Suicide Attacks in Nigeria

Graph 22: GTD 2000 – 2019 Nigeria (without Data Exclusions)[1]



Data Analysis. According to the GTD, Nigeria experienced 4,989 total attacks between 2000 and 2019. Suicide bombing attacks began during 2011, just as attacks in general were rising, and

[1] For a discussion of data exclusion options, see the methodology chapter.

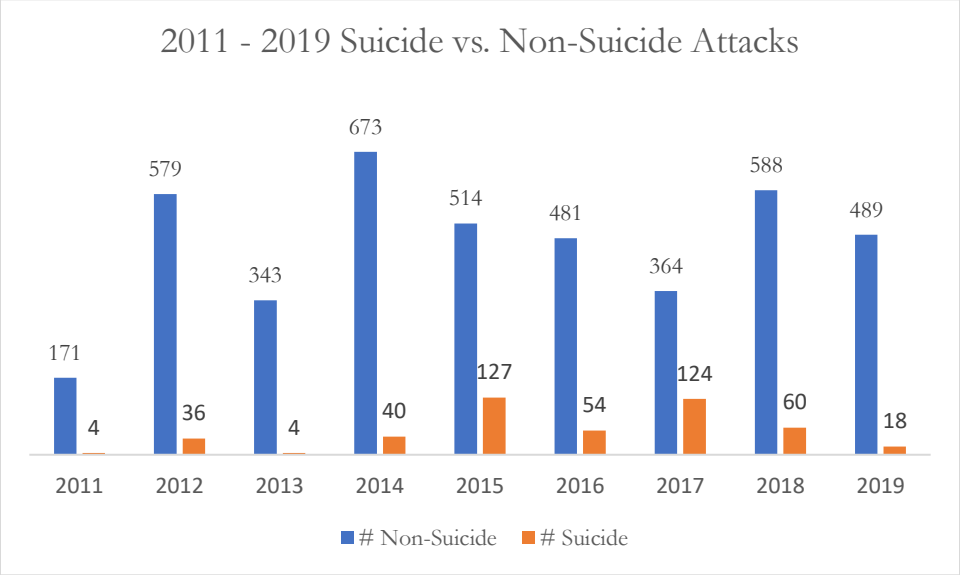
continued each year through 2019. This fact alone indicates that suicide bombing is not an act of desperation but is enmeshed in the panoply of violent means being employed during times in which violence was escalating. The following table and graph indicate the years during which the percentage of suicide bombings began to occupy a place in the overall attacks.

Table 58: GTD 2011 – 2019 Descriptive Statistics for Nigeria

Year	# Non-Suicide	% Non-Suicide	# Suicide	% Suicide	Total Attacks
2011	171	97.71	4	2.29	175
2012	579	94.15	36	5.85	615
2013	343	98.85	4	1.15	347
2014	673	94.39	40	5.61	713
2015	514	80.19	127	19.81	641
2016	481	89.91	54	10.09	535
2017	364	74.59	124	25.41	488
2018	588	90.74	60	9.26	648
2019	489	96.45	18	3.55	507
Totals	**4202**	**90.00**	**467**	**10.00**	**4669**

Note: The "%" in the given columns and "Totals" row equals the mean of either suicide or non-suicide attacks.

Chart 5: GTD 2001 – 2019 Descriptive Statistics for Nigeria



Data Analysis: The above graph, table and chart depict the data for 2011 – 2019 in Nigeria, according to the GTD, without any exclusions. When one looks at the percentage of suicide attacks (% Suicide Attacks) in the table, one can see that the tactic's use surged in 2015 and 2017. Although suicide and non-suicide attacks never reached numerical parity, as is typically the case in any conflict venue, the years 2015 and 2017 do require some further analysis to see what sorts of targets were being emphasized and de-emphasized.

Table 59: Nigeria 2011- 2019 Target Types Attacked

Target Type	**Count**	**Percentage**
Airports & Aircraft	1	0.02%
Business	196	4.20%
Educational Institution	139	2.98%
Government (Diplomatic)	13	0.28%
Government (General)	416	8.91%
Journalists & Media	26	0.56%
Maritime	7	0.15%
Military	505	10.82%
NGO	7	0.15%
Other	2	0.04%
Police	357	7.65%
Private Citizens & Property	2316	49.60%
Religious Figures/Institutions	270	5.78%
Telecommunication	36	0.77%
Terrorists/Non-State Militia	49	1.05%
Transportation	67	1.43%
Unknown	121	2.59%
Utilities	98	2.10%
Violent Political Party	43	0.92%
Grand Total	**4669**	**100.00%**

Table 60: Nigeria 2011 – 2019 Target Types Attacked (Condensed)

Target Type	Count	Percentage
Civilian	3,163	67.74
Security	862	18.46
Competitor	92	1.97
Political	429	9.19
Other	123	2.63
Total	**4,669**	**100**

Note: The condensed table consists of the following reduction principle: **Civilians** = Airports and Aircraft, Business, Educational Institution, Journalists & Media, NGO, Private Citizens & Property, Religious Figures/Institutions, Telecommunication, Transportation, Utilities, Journalists & Media, and Maritime. **Security** = military and police. **Competitor** = Terrorists/Non-State Militia and Violent Political Party. **Political** = Government (Diplomatic & General). **Other/Unknown** = Other & Unknown.

Graph 23: Nigeria 2011 – 2019 Target Types Attacked Over Time (N = 4,669)

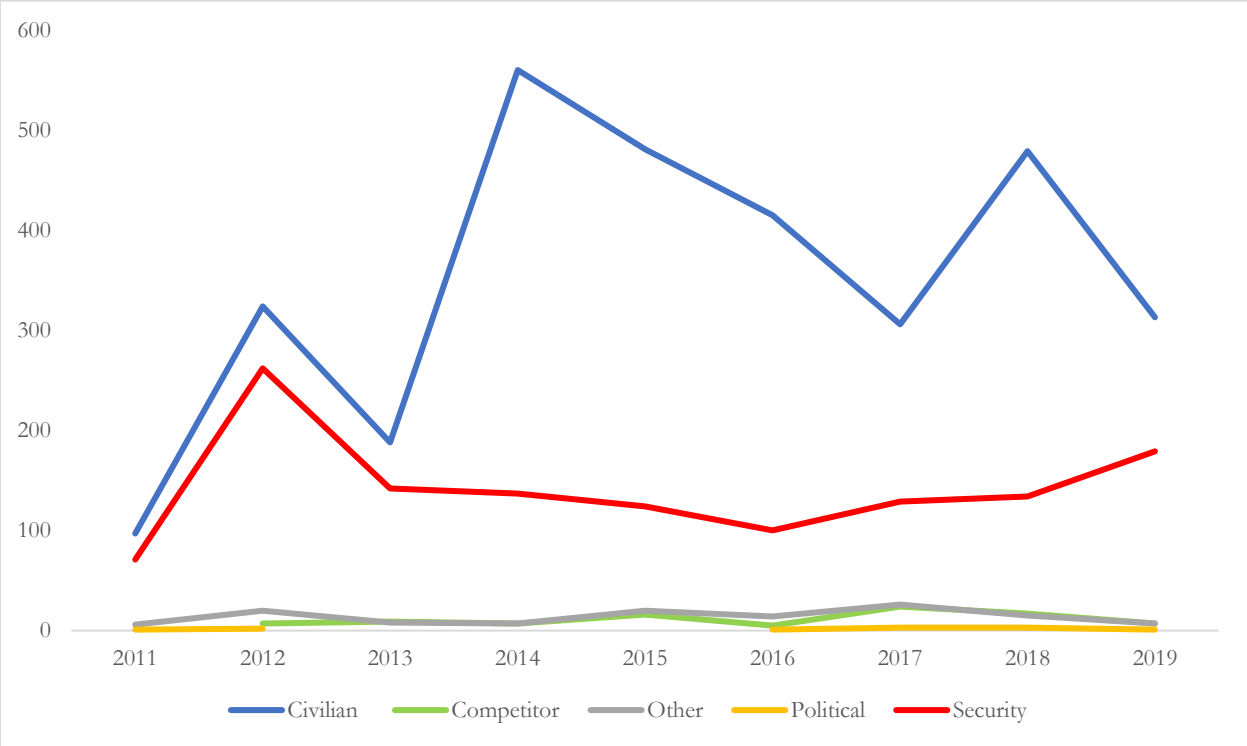


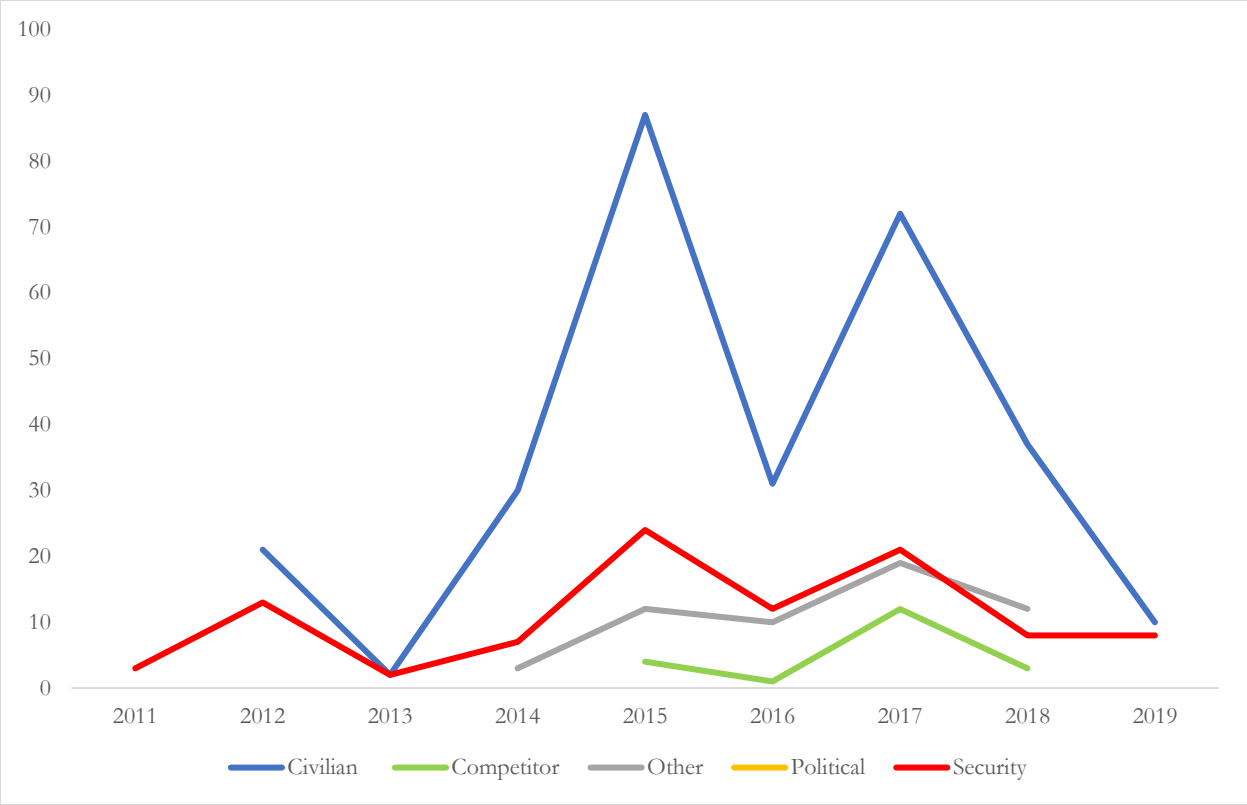
Table 61: Non-state Groups Attacking with Suicide and Non-suicide Bombing in Nigeria 2011 – 2019 by Target Type (N = 4,669)

Group/Target Type	Civilian	Security	Competitor	Political	Other	Total	Percentage
Al-Qaida in the Islamic Maghreb (AQIM)	1					1	0.02
Ansaru (Jama'atu Ansarul Muslimina Fi Biladis Sudan)	4	2				6	0.13
Bachama extremists	4					4	0.09
Bassa Kwomu extremists	2					2	0.04
Berom Militants	7					7	0.15
Biafra Zionist Movement (BZM)	1	1				2	0.04
Boko Haram	1617	795	41	8	82	2543	54.47
Civilian Joint Task Force (JTF)	1					1	0.02
Concerned Militant Leaders (CML)	1	2				3	0.06
Delta Democratic Militia		1				1	0.02
Fulani extremists	838	66	4	2		910	19.49
Gunmen	1					1	0.02
Ijaw extremists	12	1				13	0.28
Indigenous People of Biafra (IPOB)	5	3				8	0.17
Irigwe Militia	4					4	0.09
Islamic Movement (Nigeria)		1				1	0.02
Jukun militia	2					2	0.04
Koluama Seven Brothers	1					1	0.02
Movement for the Emancipation of the Niger Delta (MEND)	13	6				19	0.41
Muslim extremists	5	3				8	0.17
Niger Delta Avengers (NDA)	50					50	1.07
Niger Delta extremists	3	1				4	0.09
Niger Delta Forest Army (NDFA)	1					1	0.02
Niger Delta Greenland Justice Mandate (NDGJM)	11					11	0.24
Niger Delta Justice Defense Group (NDJDG)	1					1	0.02
Nyandan militia	4					4	0.09
Odua Peoples' Congress (OPC)	1					1	0.02
Ombatse Cult		1				1	0.02
People's Democratic Party (PDP)	2	2				4	0.09
Red Egbesu Water Lions	1					1	0.02
Red Scorpion	1					1	0.02
Separatists	1					1	0.02
Tarok Militia	2					2	0.04
Tiv Militia	4	3				7	0.15
Tribesmen	1					1	0.02
Unknown	559	390	47	3	41	1040	22.27
Urhobo Gbagbako	2					2	0.04
Grand Total	**3163**	**1278**	**92**	**13**	**123**	**4669**	**100**

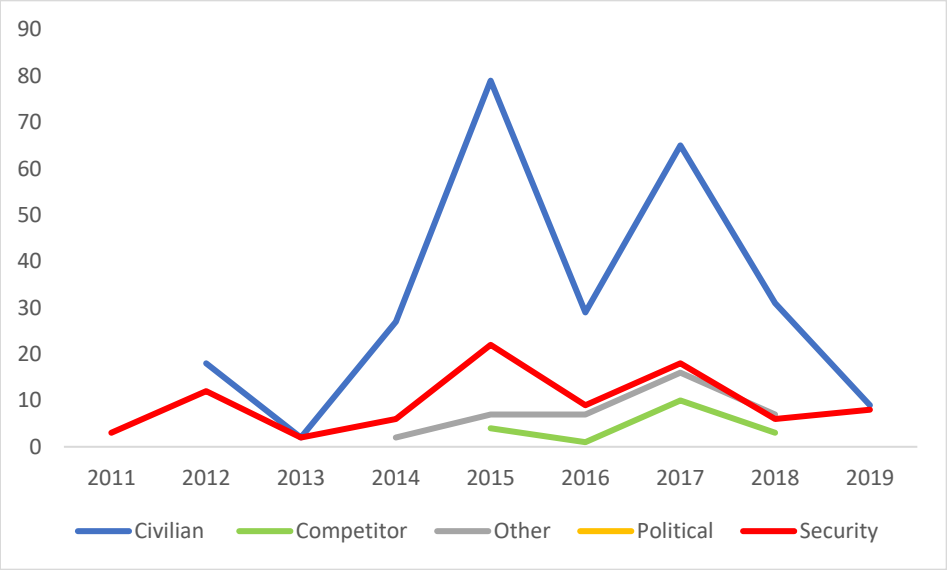
Table 62: Groups Using Suicide Bombing in Nigeria 2011 – 2019 (N = 467)

Group/Target Type	Civilian	Security	Competitor	Political	Other	Total
Boko Haram	260	86	18	1	40	405
Unknown	30	12	2	0	18	62
Grand Total	**290**	**98**	**20**	**1**	**58**	**467**

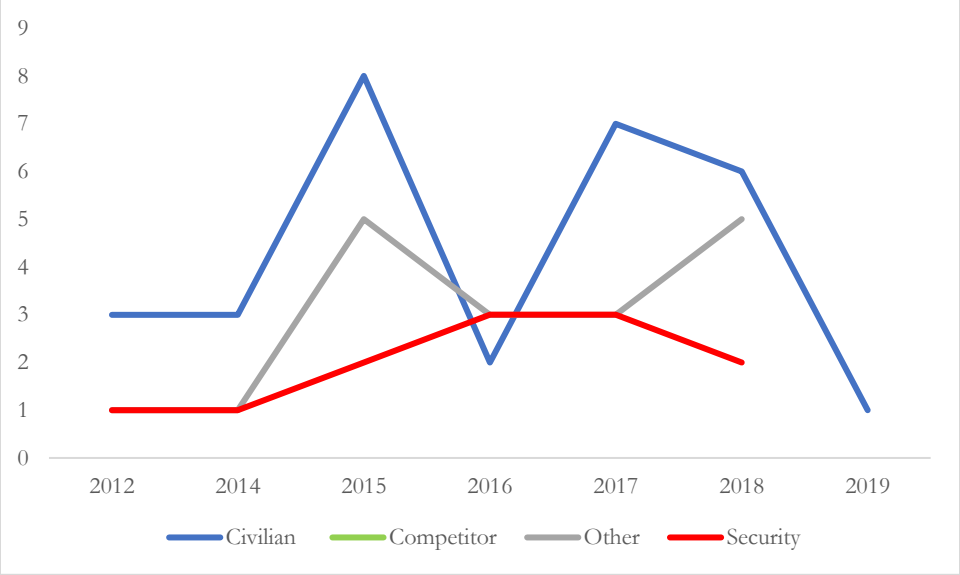
Graph 24: Suicide Bombings in Nigeria 2011 – 2019 by Target Type and Year (N = 467)



Graph 25: Boko Haram Suicide Bombings in Nigeria 2011 – 2019 (n = 405)



Graph 26: Unclaimed Suicide Bombings in Nigeria 2011 – 2019 (n = 62)



Analysis: The above tables and graphs indicate that whether suicide bombing was chosen as a means of attack or not, civilians were the most targeted entity, followed by security targets. Even though they tracked similarly (both target sets experienced increases and decreases during the same years), a patent preference for civilian targeting is readily apparent. The two named groups who shared the

bulk of responsibility for attacks overall were Boko Haram and Fulani extremists. However, only Boko Haram carried out suicide bombing attacks and the Fulani did not (or were not credited with having done so). There were a number of unclaimed ("other") suicide bombing attacks, but since Boko Haram's share accounted for 87% (405 out of 467), an analysis of that entity's targeting behavior is in order. Looking at the attack patterns for both Boko Haram and the unknown attackers reveals similar targeting preferences. Hence, a general assessment of suicide bombing in the Nigerian battlespace appears to be internally valid.

Suicide bombings hit two peaks in Nigeria, since their first use in 2011. The first was during 2015 and the second during 2017. In each case, a steep rise in civilian targeting was apparent. Minor rises in security targeting did accompany these peaks, but the difference in scale was pronounced in that a general preference for civilian targets reflected a 3.6:1 (87: 24) and 3.42: 1 (72: 21) ratio in 2015 and 2017, respectively. The observation that seems to be in need of explanation surrounds the rise and fall of suicide bombings between 2015 and 2019. During 2016, suicide bombings dropped a great deal from their 2015 levels. The following year, suicide bombings surged again, then began to decline during the next two years. Yet when one looks at the overall attacks in the tables and charts above the graphs, it becomes apparent that the ebb and flow of violence was largely unaffected. What this means is that the use of suicide bombing, and not violence in general, exhibited a unique pattern.

One possible explanation for the rise and fall of suicide bombing, but not the pattern of overall violence, is that a greater proportion of suicide bombers were not necessarily willing participants. It has been routinely observed that Boko Haram kidnaps and forces its detainees to

conduct suicide bombings. The observed pattern of suicide bombings might be a consequence of this practice. In short, accumulating suicide bomber strength is a time-consuming affair. In order to gain access to a larger pool of suicide bombers, they must be captured, groomed (likely tortured), and deployed.

A well-publicized kidnapping events (2014: Chibok girls)[2] might easily answer why 2015 was a peak year for suicide bombings, when compared to other years. It may or may not explain 2017, but despite the occasional large-scale, highly publicized, kidnapping, Boko Haram has routinely kidnapped females and used them as suicide bombers (Galehan 2019; Warner, Chapin and Matfess 2019). It's possible that feast or famine in terms of kidnapping female victims is reflected in the rise and fall of disproportionately female suicide bombers.[3]

Another explanation for an increase in suicide bombings during 2015 was Boko Haram's newly pledged allegiance to IS in March of that year. Re-branding itself as ISWAP (Islamic State West Africa Province) could explain why suicide bombings increased from that point until the apparent demise of their senior partner in Iraq and Syria. The act of re-branding, as I noted elsewhere in this dissertation, seems to be accompanied by major changes in suicide bombing behavior (for those groups who are inclined to commit suicide bombings). In theory, allegiance to IS is demonstrated by a massive uptick in suicide bombing output, for which an entity must have the

[2] See "Six years ago, Boko Haram kidnapped 276 schoolgirls. Where are they now?" *National Geographic*, March, 2020; accessible online at https://www.nationalgeographic.com/magazine/article/six-years-ago-boko-haram-kidnapped-276-schoolgirls-where-are-they-now.

[3] This likely isn't the whole story, as the organization's suicide bombers, whether male or female are not necessarily unwilling participants. The cumulative effect of kidnappings over time likely also accounts for some of the routine use of female suicide bombers, but assuming all females to be forced into self-explosion is inconsistent with the history of suicide bombing in other venues.

human resource input. In anticipation of a junior partnership role, Boko Haram may have sought a means in 2014 to achieve an objective in 2015. In addition to a macro level assessment of rapid increases and decreases in suicide bombings, a more fine-grained approach requires an analysis of the specific targets within the targets sets. This allows for behavioral observations to be more coherently explained and for decision patterns to emerge.

Table 63: Suicide Bombing Civilian Target Set | Sub-Targets in Nigeria 2012- 2019 (n = 288)

Sub-Targets	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Bank/Commerce			1						1
Bus (excluding tourists)				2					2
Bus Station/Stop		1	1	12	2				16
Domestic NGO	1								1
Entertainment/Cultural/Stadium/Casino			1					1	2
Gas/Oil/Electric			3	2	1	1			7
House/Apartment/Residence						5	3		8
Laborer (General)/Occupation Identified	3								3
Marketplace/Plaza/Square		1	8	29	6	6	5		55
Medical/Pharmaceutical				2		3		1	6
Memorial/Cemetery/Monument						1			1
Newspaper Journalist/Staff/Facility	2								2
Place of Worship	12		4	19	5	9	8	3	60
Procession/Gathering (funeral, wedding, birthday, religious)			1			3			4
Public Area (garden, parking lot, garage, beach, public building, camp)				1		1			2
Race/Ethnicity Identified				1					1
Refugee (including Camps/IDP/Asylum Seekers)					7	13	2	1	23
Religion Identified			1	2					3
Religious Figure	1		1	1					3
Restaurant/Bar/Café			1	2					3
Retail/Grocery/Bakery			1	1		1	1		4
School/University/Educational Building			5	1		9	1		16
Student			1						1
Taxi/Rickshaw					1				1
Unnamed Civilian/Unspecified			1	10	6	16	11	2	46
Village/City/Town/Suburb				2	3	4	6	2	17
Total	**19**	**2**	**30**	**87**	**31**	**72**	**37**	**10**	**288**

In general, the most commonly attacked civilian target was a place of worship: 21% (60 out of 288). During 2012, it represented 63% of the targets within the civilian target set, and the religious composition of those targets was almost always Christian. After 2012, the overwhelming majority of religious targets were mosques; sometimes listed as Shi'a by the GTD, but mostly not. This targeting shift is interesting in terms of the embedded signaling that appears to be occurring. When attacking Christians under the banner of Islam one can easily see the desire to terrorize an established out-group. However, when targeting Muslims under the banner of Islam, it appears more in line with the idea that those Muslims who are attacked are being compelled to recognize that they are behaving as an out-group. It is therefore an act of dominating one's own "kind" and the use of such extreme violence acts as a forcing mechanism that seeks compliance with the group's interpretation of what constitutes a Muslim and what does not.

During 2015, the top three named sub-targets for the civilian target set (n = 87) was marketplace/plaza/square/ 33% (29 out of 87), place of worship 22% (19 out of 87), and bus station/stop 14% (12 out of 87). During 2017, the focus was markedly different. The most commonly assaulted named sub-target for the civilian target set (n = 72) was refugees (including camps, internally displaced persons, and asylum seekers) 18% (13 out of 72). Places of worship were also targeted 12.5% of the time (9 out of 72).

Assuming targets are not attacked randomly, variance in sub-targets allows me to make an inference about their meaning, in that each sub-target type might indicate a different message is being conveyed by the attackers. A second assumption is that civilians are targeted because they are

the intended audience for the messaging. Therefore, it is useful to consider how a population might interpret attacks on different sub-target types in unique ways.

Attacking places of worship seems to speak to an intent to generate divisions among the populace. Especially, as I noted above, it is a means to create a within-group distinction when used against co-sectarian co-religionists. A specific segment of the population is compelled to see internal divisions. Marketplaces, plazas, and squares, fit into what one might call "gathering spaces." Attacks on these sorts of targets allows the population to understand that they must be hesitant to conduct normal daily routines. The population is coerced into general paralysis. Bus stations and bus stops fit into what one might call "mobility centers." Attacks on these sorts of targets allows the population to understand that they are not free to move around and must stay put or find another means of individualized travel. The population is coerced into a specific form of paralysis. Among the most extreme attacks is that which is carried out against refugees (mainly internally displaced persons). Not only are they the most deprived, but their status indicates that they are naturally defenseless and conceivably do not pose a physical threat to the organization committing the attacks. If civilians are said to be "soft" targets, these are probably the softest among them. The population is compelled to conclude they are among the least wanted and subject to eradication.

Although the civilian target set was most preferred in Nigeria for suicide bombings, or any form of attack, the security target type was the second most preferred. A closer look at the data reveals that the cumulative rise and fall in civilian targeting was generally similar in pattern, even if the magnitude differed. A disaggregation of the security target set follows.

Table 64: Suicide Bombing Security Target Set | Sub-Targets in Nigeria 2011- 2019 (n = 98)

Sub-Targets/Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Government Building/Facility/Office		1		1	1	1	1			5
Government Personnel (excluding police, military)		2			2		1			5
Head of State					1					1
Military Barracks/Base/Headquarters/Checkpost	1	3		2	3	3	3	4	5	24
Military Checkpoint			1	3	12	2	6			24
Military Personnel (soldiers, troops, officers, forces)						5	5	1	3	14
Military Transportation/Vehicle (excluding convoys)								1		1
Military Unit/Patrol/Convoy		1	1				2			4
Paramilitary		2								2
Police Building (headquarters, station, school)	1	2		1	2	1	1			8
Police Checkpoint					2		1	2		5
Police Patrol (including vehicles and convoys)		1					1			2
Police Security Forces/Officers	1	1								2
Politician or Political Party Movement/Meeting/Rally					1					1
Total	**3**	**13**	**2**	**7**	**24**	**12**	**21**	**8**	**8**	**98**

Analysis: It is notable that attacks on military checkpoints seemed to have hit a peak during 2015, but during the periods 2011 – 2012 and 2018 – 2019 it seems they were not hit at all. Military barracks, bases, headquarters, and "checkposts" were attacked by suicide bombers during most years, as were police buildings (to a lesser degree). This suggests that in 2015 the insurgent forces may have felt they were on the offensive, but resources were at least nominally directed at stationary, likely fortified, targets during the 2011 – 2019 segment of the conflict.[4]

CUT TWO: ACLED DATA

Descriptive Statistical Analysis of ACLED Data in Nigeria

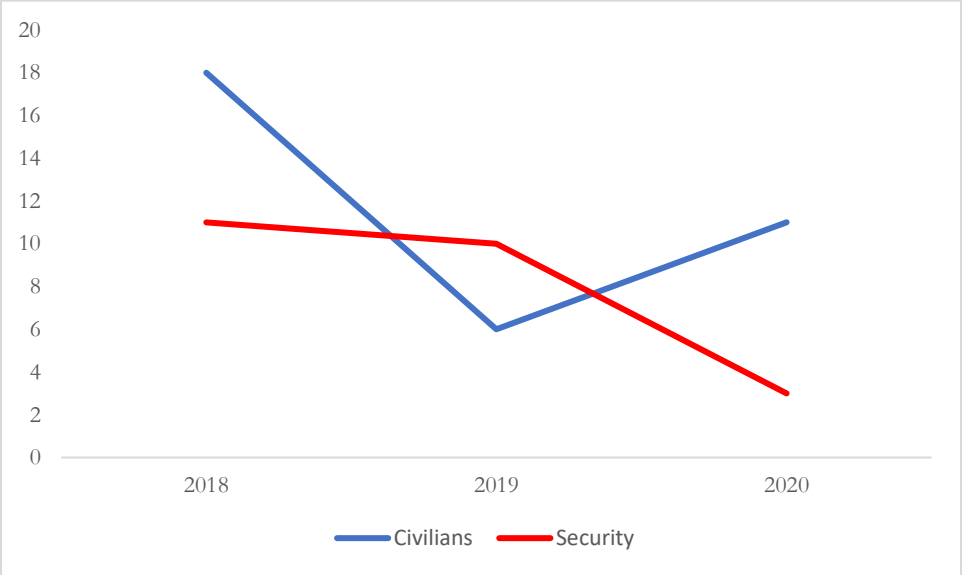
[4] I did investigate the attacks on "military personnel" that registered 5 attacks in 2016, 5 in 2017, 1 in 2018, and 3 in 2019. As it turns out, these were mostly foiled and failed attacks in which large numbers of female suicide bombers were killed by state forces.

The ACLED data for Nigeria covers a three-year period: (April) 2018 – 2020, which consists of 7,030 incidents. Prior to any modifications, ACLED data indicate that there were 28 suicide bombing attacks from 2018 – 2020. After implementing the additional coding rules, described in the appendix, the potential count then rose to 72. However, after having applied my uniquely created removal/retention process, the final number consisted of 59 (capturing 111% more suicide bombing incidents than ACLED itself had coded as such), using roughly 106 suicide bombers. Without having completed the refinement process, I observed that ACLED had listed 16 "suicide bomb" attacks in 2018, 5 in 2019, and 7 in 2020. After completing my removal/retention exercise for ACLED data, I found 29 in 2018, 16 in 2019, and 14 in 2020. This can also be compared to the GTD data (enumerated above), which is far lower in its count of suicide bombings. For instance, the GTD counts 8 suicide bombings for 2018, as well as 2019 (2020 data was not available at the time of this writing). In short, the suicide bombing data in Nigeria was severely undercounted in the GTD, while ACLED was only mildly better.

Although the suicide bombing data for Nigeria represents a somewhat smaller sample set than do others I have analyzed in this dissertation, there is some room for analysis. For instance, females were listed in 18 out of 59 events. This would indicate that they were used about 30% of the time, but one must also consider that in some events multiple females were used and, in some others, multiple males may have been used. ACLED's narratives only indicate when females are involved, but they do not say when males are the attackers. There were a couple rare instances in which they stated there was a combination of sexes.

I found 2 failed and 19 foiled attacks. The 2 failed attacks occurred in 2019, but the majority of foiled attacks occurred in 2018 (n = 12). Given that there were 29 suicide bombings that year, this number indicates that 41% were foiled. For comparison, in 2019, 3 of the 16 attacks were foiled and 2 failed (31% failed/foiled), and in 2020, 4 of 14 were foiled (29% foiled). The foiled/failed rate indicates that Boko Haram/ISWAP was apparently either more fastidious or luckier in 2019 and 2020 than they were in 2018. In either case, it is clear that experiencing a high rate of failure during 2018 did not fully dissuade them from carrying out suicide bombings in 2019 and 2020. I then considered what their targeting preferences were during all three years, to see if a shift was detectable.

Graph 27: Suicide Bombings 2018 – 2020 (n = 59)



Analysis: There was a clear switch in targeting priorities with respect to suicide bombing. The above line graph demonstrates that suicide bombing resources were allocated in opposite ways each year, with an emphasis on civilians in 2018, on security in 2019, followed by civilians in 2020. Given the above discussion of success/failure rates, it is possible to infer that Boko Haram's preference was to attack civilians (in 2018), but given their high rates of failure that year they switched to targeting

security elements (2019). After having made that switch, they resumed their preferred civilian targeting the following year (2020); possibly as a consequence of having forced security elements to shore up their own defenses. Whatever the case may actually have been in the minds of the decision makers, it does appear that finite human (bombing) resources were allocated in opposite ways each year.

Table 65: Enhanced ACLED Data: Coding Suicide Bombing Targets by Battlefield Conditions

Target Type/Sub-Event Type	Armed clash	Arrests	Attack	Disrupted weapons use	Government regains territory	Shelling/artillery/missile attack	Suicide bomb	Grand Total
Civilians	5		2	5			23	35
Security	14	1		2	1	1	5	24
Grand Total	**19**	**1**	**2**	**7**	**1**	**1**	**28**	**59**

Note: The columns were derived directly from ACLED data, but I created the rows by going a step further in my disaggregation process, which was developed from embedded narratives (supplied by ACLED).

Data Analysis: The above table demonstrates how ACLED's focus on "suicide bombing" as a stand-alone category enabled its coders to miss significant uses of the practice. There seemed to have been a proclivity to code an event sub-type as "suicide bomb" when civilians were targeted on 82% of the occasions (23 out of 28), but when one looks at the overall total it becomes clearer that civilian targeting actually represented 59% of the occasions (35 out of 59); still a majority, but not as pronounced. ACLED's original coding structure captured only 5 suicide bombing attacks, or 18%, that were carried out against security targets, but I found that they actually represented 41%; still a

minority, but approaching parity. What this means is that taking the ACLED data at face value would provide an inaccurate measurement of the phenomenon. However, disaggregating target types, based on the dataset's existing narratives, is a more viable path for better understanding how suicide bombing violence is used by non-state actors.

Beyond the above descriptive statistics and my subsequent interpretation, I investigated the data in an inferential manner. Below are hypotheses that mirror what were put forth in the previous chapters. Each one considers the relationship between three variables that I created: PCT, Number of Bombers, and Combined Arms. Again, the null hypothesis, H(0), that was tested in each case is that there is no relationship between any of the given variables, whereas the alternative hypotheses I tested were as follows.

Ha(1): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and the number of bombers used to attack it.

Ha(2): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether combined arms are used to attack it.

Ha(4): I expect there to be a relationship between the use of combined arms and the number of suicide bombers used to attack a target.

Table 66: Pearson's Correlation Coefficient for PCT, Number of Bombers, and Combined Arms

	PCT	Number of bombers	Combined Arms
PCT	1		
Number of Bombers	-0.1811	1	
Combined Arms	-0.1246	0.5798	1

Data Analysis: *Data Analysis:* PCT and Number of Bombers are interval variables, where PCT consists of 4 possible values (Min = 0 – Max = 3) and Number of Bombers 6 (Min = 1 – Max = 6),

with a range of measurement being -1 to 1. Combined Arms is a dichotomous variable, where it has 2 possible values (Min = 0 and Max = 1) and has a range of measurement between 0 and 1.[5] The above table (with correlation coefficients) provides the results of the following hypothesis tests.

Ha(1): We can reject the null hypothesis that there is no relationship between the PCT value and the number of suicide bombers that attacked the target. The relationship is negative, but of low significance (r = -0.1811). This finding could indicate that the threat value of a potential target for suicide bombing might be a factor for insurgents who were considering whether to attack a more threatening target, or save their resources for a less threatening one. The evidence, however, is not weighty.

Ha(2): We can reject the null hypothesis that there is no relationship between the PCT value and whether combined arms were used in a suicide bombing attack. The relationship is negative, but of low significance (r = -0.1246). This finding might be interpreted to mean that combined arms, via suicide bombing, are more regularly used when the threat profile of a target is lower. On the surface, this would indicate that balancing against threats was a secondary objective in comparison with a desire to use combined arms to terrorize an unarmed population.

Ha(4): We can reject the null hypothesis that there is no relationship between the use of combined arms and the number of suicide bombers attacking a target (r = 0.5798). We can accept the

[5] In other chapters I had considered six alternative hypotheses; labeled Ha(1) through Ha(6). In this iteration, I was only able to consider three. The reason is that the excluded three hypotheses included a variable called "vehicular," which could not be tested due to ACLED narratives failing to mention if a vehicle was involved. Consequently, three hypotheses had to be dropped from consideration.

alternative hypothesis, which is positively signed and for which its significance is medium. This finding seems to imply that there is a propensity to enhance a sophisticated coordination attack (combined arms) with a force multiplicative effort (more suicide bombers). As a matter of cautious interpretation, many of the incidents in which more than one suicide bomber took action were coded as combined arms assaults. This is especially so because 38 out of 59 events (64%) consisted of combined arms attacks and of that number 31 featured more than one suicide bomber (82%). What this information also tells us is that rarely does a single suicide bomber attack a target.

A major caveat to this inferential statistical exercise can be found in the above descriptive data, which is mainly applicable to the results found in Ha(1) and Ha(2), but partly to Ha(4). The descriptive data shows that targeting preferences over three years varied: the dominant target class shifted from civilians in 2018, to security in 2019, then back to civilians again in 2020. Yet, when looking at the Pearson's Correlation Coefficient over all three years cumulatively, it isn't so obvious that these shifts occurred. I then identified which target sets were allocated what number of bombers. Over three years, the mean number of bombers for a civilian target was 1.94, whereas the mean number of bombers for a security target was 1.58. When that number is broken out by year, one can see variation in those means. In 2018, 2.1 suicide bombers attacked civilians and 1.8 attacked security. During 2019, 2.7 attacked civilians and 1.2 attacked security. During 2020, 1.3 attacked civilians and 2 attacked security. Taken together, this means that Boko Haram employed suicide bombers against more civilian targets during 2018, with a higher number of bombers allocated toward them, against more security targets during 2019, with fewer bombers allocated toward them, and against more civilian targets during 2020, with fewer bombers allocated toward them.

Concluding Remarks

The forgoing analysis was drawn from two independent data sources, which when looked at separately, generated some interesting findings. The data reveal overall targeting patterns, which are different for suicide versus non-suicide bombing. Given that the primary organization committing suicide bombing attacks was Boko Haram/ISWAP, the analysis speaks most specifically to that entity.

GTD data reveal that civilian targeting, whether by suicide or not, was always preferable to security targeting. The use of suicide bombing grew to a point in 2015 and 2017 where some peaks were observable, with civilian targeting still maintaining a dominant position. Although a large number of females are known to have become suicide bombers, likely as a consequence of forced "labor," an alliance with IS might explain some of the sudden rise in attacks (at least for 2015). When looking at the civilian target set, sub-targets reveal some possible variation in meaning as a consequence of fluctuations in targeting.

Although terrorizing civilians seems to have been favored over diminishing security elements' capacity to wage battle, even when security targets were hit, they were largely stationary, as opposed to convoys and formations. This suggests that the use of suicide bombing against them was not aimed at winning battles, but forcing security elements to remain static. The only sizable peak year for security targeting, 2015, was also the first peak year for civilian targeting. This suggests that Boko Haram/ISWAP was trying to gain momentum with suicide bombing, as they were pledging their allegiance to IS. In other words, the ability to appear to be winning was important during that time. Yet, given the limited end-state sought by the group, one can understand that a nominal position as the "strong horse" was likely sufficient for their brand. Boko Haram/ISWAP is an

insurgency with limited land acquisitive aspirations. They seek to wield control over a certain portion of the country and do not espouse a desire for full dominance, as their IS affiliates did contemporaneously. The organization's unique targeting preferences seem to reflect their limited goals.

ACLED data also reveal that Boko Haram prefers to attack civilians with suicide bombers, rather than security targets, and that they tend to do so with more than one bomber. Suicide bombing, then, is more closely associated with civilian-centric versus security-centric targeting predilections, even though the organization using it is the primary insurgent entity seeking to undermine the incumbent regime. Like the GTD, ACLED data demonstrate that a substantial number of females were used. Interestingly, the data made clear that a switch from civilian targeting in 2018 to security targeting in 2019, and back to civilian targeting in 2020 was indicative of an intention to use suicide bombing for different purposes each year.

It became clear that a greater than 40% failure rate in one year did not deter the entity from using suicide bombers in the years that followed. One might conclude that setbacks in efficacy are an insufficient reason to dissuade its future use. Since a threshold for Boko Haram/ISWAP to cease suicide bombing operations was not observed, it cannot be definitively asserted that a particular upper limit exists.

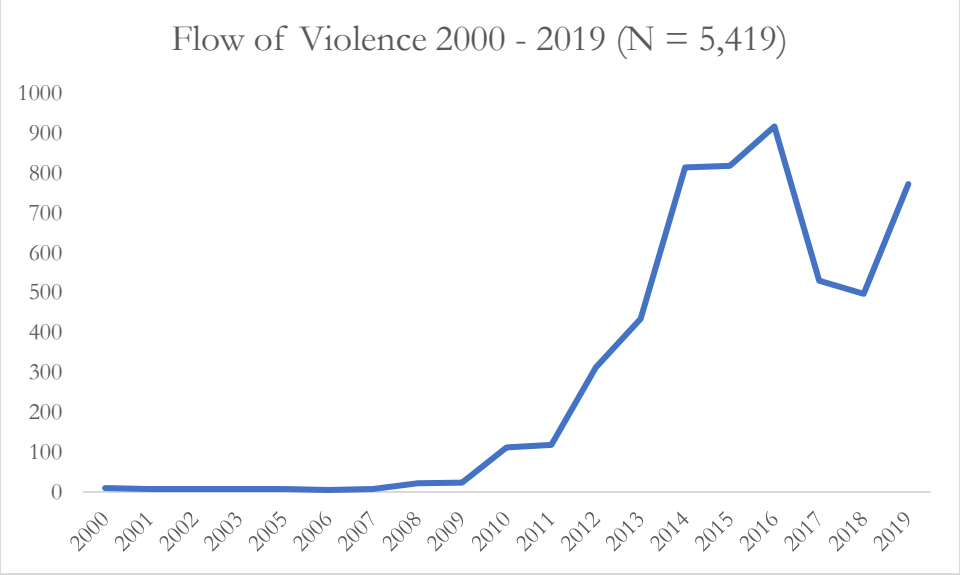
Chapter 9: The Yemen Battlespace – Balancing Against Security Threats Versus Terrorizing Civilians

This chapter looks at the Yemen battlespace, between 2000 and 2019. Similar to the previous chapters, I focus on targeting preferences by violent non-state actors who accept suicide bombing as part of their warfighting arsenal. The chapter first considers the insurgent landscape and then narrows the focus to a data analysis of the primary organization that became what appears to be the leader in the suicide bombing space.

Cut One – GTD Data

Analysis of Suicide and Non-Suicide Attacks in Yemen

Graph 28: GTD 2000 – 2019 Yemen (without Data Exclusions)[1]



Data Analysis. According to the GTD, Yemen experienced 5,419 total attacks between 2000 and 2019. Suicide bombing attacks began at the beginning of 2000, discontinued until 2006, then

[1] For a discussion of data exclusion options, see the methodology chapter.

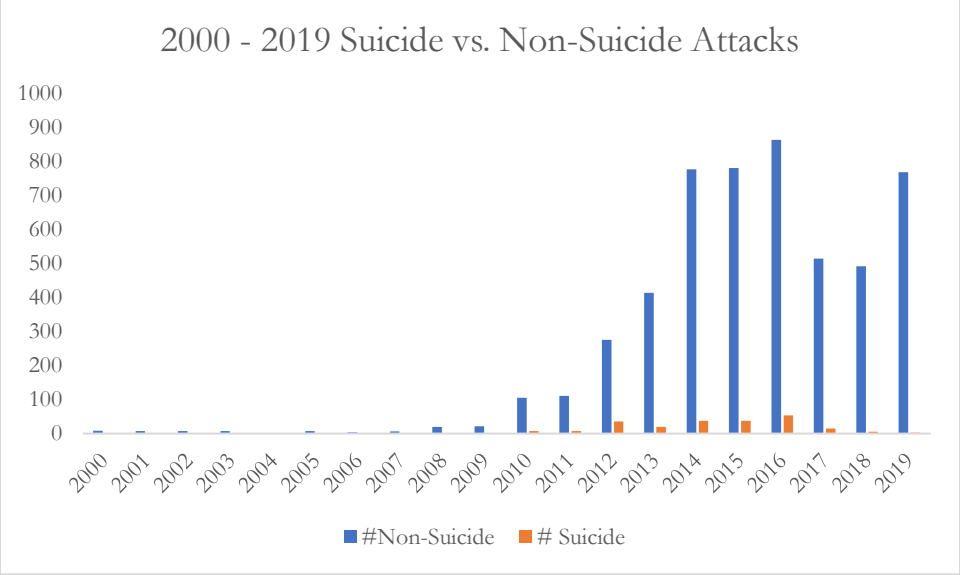
continued through 2019 (n = 228). The following table and graph indicate the years during which the percentage of suicide bombings occupied a place in the overall attacks.

Table 67: GTD 2000 – 2019 Descriptive Statistics for Yemen

Year	#Non-Suicide	% Non-Suicide	# Suicide	% Suicide	Total Attacks
2000	8	80.00	2	20.00	10
2001	7	100.00	0	0.00	7
2002	7	100.00	0	0.00	7
2003	7	100.00	0	0.00	7
2004	0	0.00	0	0.00	0
2005	7	100.00	0	0.00	7
2006	4	80.00	1	20.00	5
2007	6	85.71	1	14.29	7
2008	20	90.91	2	9.09	22
2009	21	91.30	2	8.70	23
2010	105	93.75	7	6.25	112
2011	111	94.07	7	5.93	118
2012	276	88.46	36	11.54	312
2013	414	95.39	20	4.61	434
2014	777	95.45	37	4.55	814
2015	781	95.48	37	4.52	818
2016	864	94.22	53	5.78	917
2017	515	97.17	15	2.83	530
2018	492	98.99	5	1.01	497
2019	769	99.61	3	0.39	772
Totals	5191	95.79	228	4.21	5419

Note: The "%" in the given columns and "Totals" row equals the mean of either suicide or non-suicide attacks.

Chart 6: GTD 2000 – 2019 Descriptive Statistics for Yemen



Data Analysis: The above graph, table and chart depict the data for 2000 – 2019 in Yemen, according to the GTD, without any exclusions. When one looks at the percentage of suicide attacks (% Suicide Attacks) in the table, one can see that it often appeared to be high for a few select years during the initial decade. However, that is an artifact of the few attacks that occurred in general (e.g., 2 suicide bombings out of 10 total attacks = 20%). During what one might call the first period, 2000 – 2011, attacks in general were sparse and this was true for suicide bombings. However, as attacks increased during what one might call the second period, 2012 – 2019, all attacks (suicide bombing included) rose dramatically. During 2012, suicide bombings reached their highest relative percentage levels (11.54%). Interestingly, from 2012 – 2017 the highest absolute number of suicide bombings were observed, with 2017 being the peak year, but during 2018 and 2019 the number of attacks abruptly ended. In order to explore why that was the case, even as attacks continued to be exceedingly high, an initial look at what sorts of targets were being attacked is in order.

Table 68: Yemen 2000 – 2019 Target Types Attacked

Target Type	Count	Percentage
Airports & Aircraft	15	0.28%
Business	180	3.32%
Educational Institution	78	1.44%
Food or Water Supply	2	0.04%
Government (Diplomatic)	66	1.22%
Government (General)	489	9.02%
Journalists & Media	131	2.42%
Maritime	23	0.42%
Military	1597	29.47%
NGO	50	0.92%
Other	4	0.07%
Police	290	5.35%
Private Citizens & Property	1560	28.79%
Religious Figures/Institutions	107	1.97%
Telecommunication	2	0.04%
Terrorists/Non-State Militia	324	5.98%
Tourists	14	0.26%
Transportation	23	0.42%
Unknown	140	2.58%
Utilities	171	3.16%
Violent Political Party	153	2.82%
Grand Total	**5419**	**100.00%**

Table 69: Yemen 2000 – 2019 Target Types Attacked (Condensed)

Target Type	Count	Percentage
Civilian	2,356	43.48
Security	1,887	34.82
Competitor	477	8.8
Political	555	10.24
Other	144	2.66
Total	**5,419**	**100**

Note: The condensed table consists of the following reduction principle: **Civilians** = Airports and Aircraft, Business, Educational Institution, Journalists & Media, NGO, Private Citizens & Property, Religious Figures/Institutions, Telecommunication, Transportation, Utilities, Journalists & Media, Food or Water Supply, Tourists, and Maritime. **Security** = military and police. **Competitor** = Terrorists/Non-State Militia

and Violent Political Party. **Political** = Government (Diplomatic & General). **Other/Unknown** = Other & Unknown.

Graph 29: Yemen 2000 – 2019 Target Types Attacked Over Time (N = 5,419)

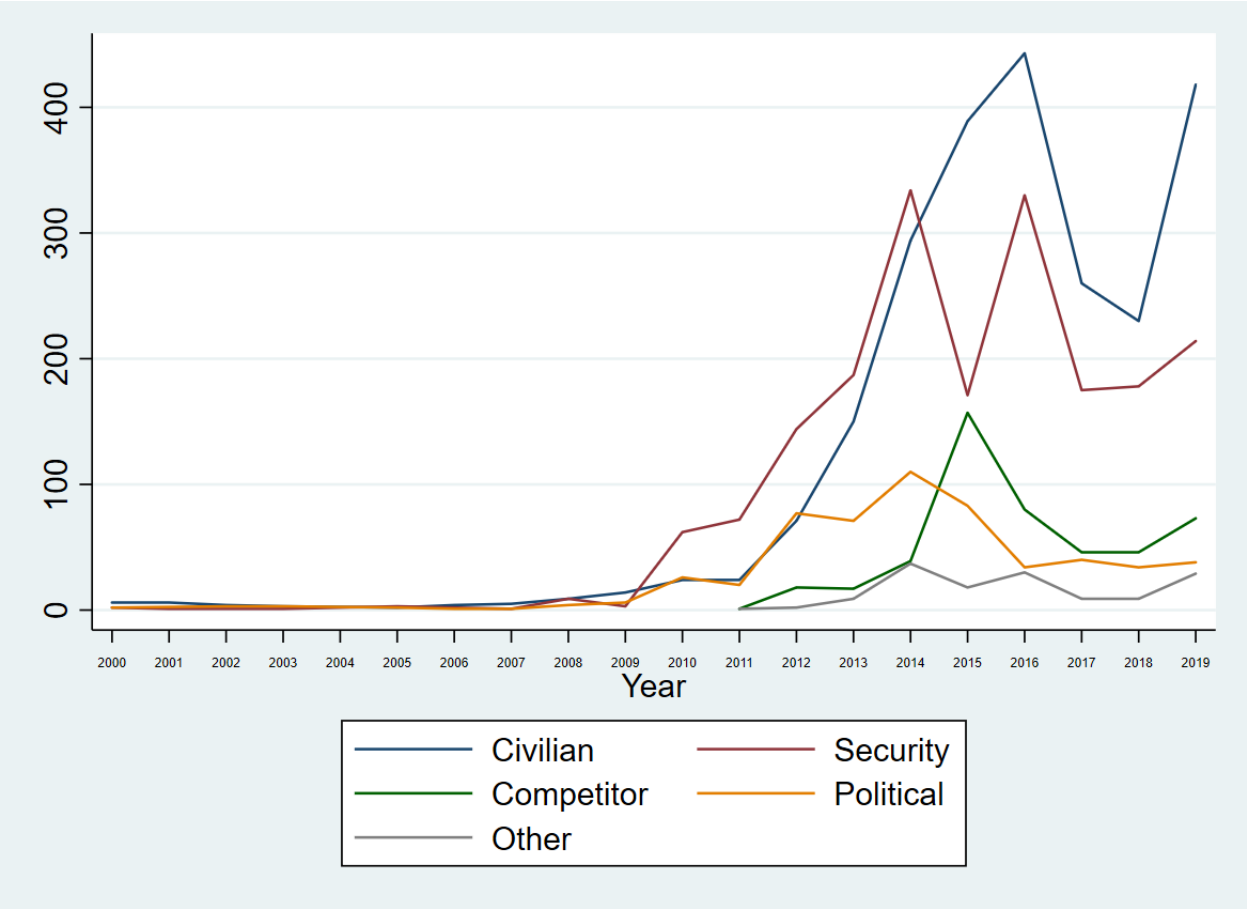


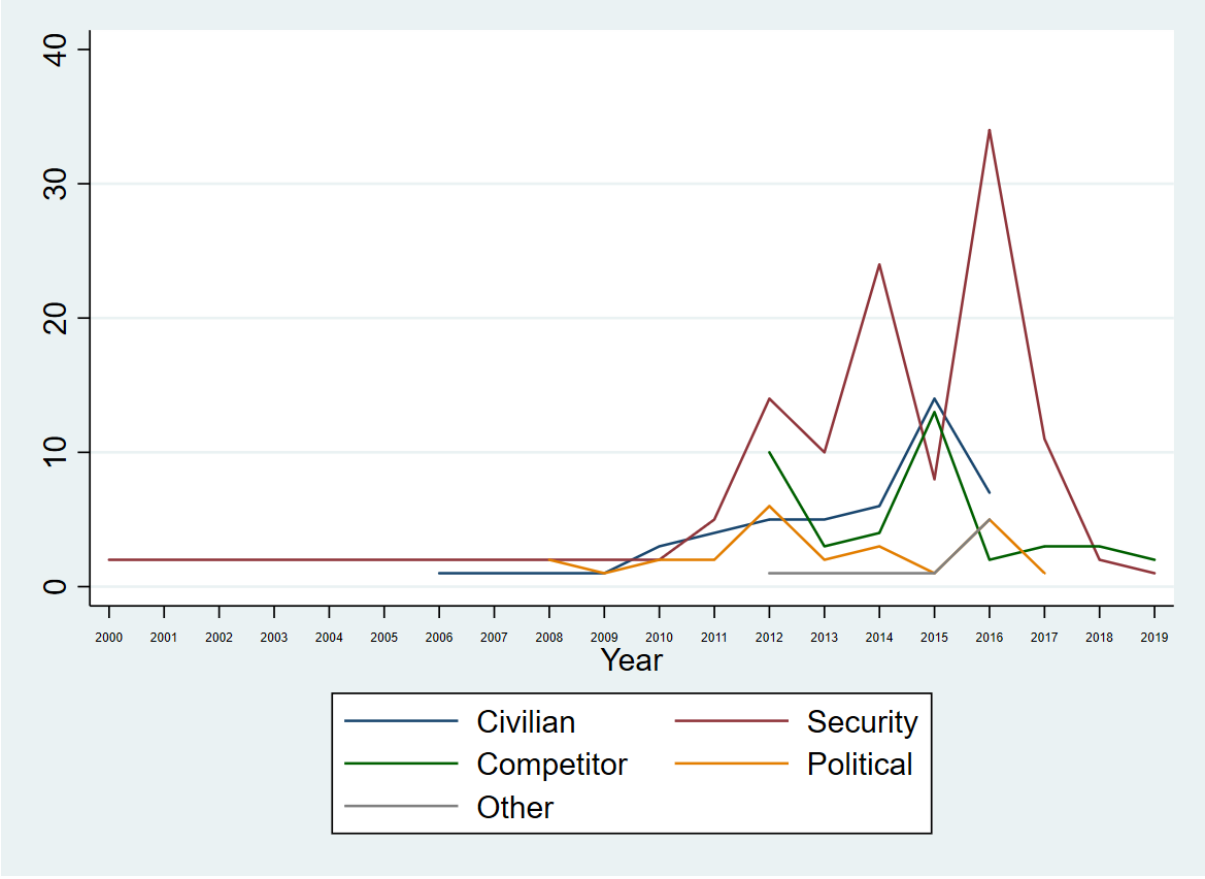
Table 70: Non-state Groups Attacking with Suicide and Non-suicide Bombing in Yemen 2000 – 2019 by Target Type (N = 5,419)

Group/Target Type	Civilian	Competitor	Political	Other	Security	Total
Abida Tribe	2		1			**3**
Abu Abbas Brigade	3		1		5	**9**
Adan Abyan Islamic Army (AAIA)					1	**1**
Adan-Abyan Province of the Islamic State	7	8	8		33	**56**
Al Bayda Province of the Islamic State	3	1				**4**
Al-Amaliqah Brigades					1	**1**
Al-Bakazim	2					**2**
Al-Herak Al-Tihami Movement					1	**1**
Al-Islah Party	19	4	2		2	**27**
Al-Jub Tribe	1					**1**
Al-Mus'abi Tribe	1					**1**
Al-Qaida					2	**2**
Al-Qaida in the Arabian Peninsula (AQAP)	173	112	169	17	613	**1084**
Al-Qaida in Yemen	4		3		5	**12**
Al-Shabaab al-Mu'minin	1				3	**4**
Al-Toaiman Tribesmen	1					**1**
Al-Zaidi Tribe - Mareb	1					**1**
Aqmur	1					**1**
Dissident Republican Guard			1			**1**
Gunmen	1					**1**
Hadramawt Province of the Islamic State	2			1	14	**17**
Hadramawt Tribes Alliance	1				2	**3**
Hassan Mabkhut Group	2					**2**
Houthi extremists (Ansar Allah)	1534	177	120	47	607	**2485**
Hushaysh Tribal Members			1			**1**
Islamic State of Iraq and the Levant (ISIL)		1				**1**
Joint Meeting Parties (JMP)					1	**1**
Lahij Province of the Islamic State			2		1	**3**
Muslim extremists	16	2	4		2	**24**
Popular Resistance Committees (Yemen)	2	22	1		9	**34**
Sanaa Province of the Islamic State	21	6		2	1	**30**
Secessionists					3	**3**
Separatists					5	**5**
Shabwah Province of the Islamic State					1	**1**
Southern Mobility Movement (Yemen)	5	2	18	1	38	**64**
Southern Resistance Forces (SRF)	2	2	2		15	**21**
Southern Yemen Separatists			1		6	**7**
Supporters of Abd Rabbuh Mansur Hadi	2	12			5	**19**
Supporters of Ali Abdullah Saleh	1					**1**
Supporters of Saddam Hussein	1					**1**
Sympathizers of Al-Qaida Organization	1		3			**4**
Takfir wal-Hijra (Excommunication and Exodus)			1			**1**
Tehama Movement	1	1				**2**
Tribal Group	1					**1**
Tribesmen	53	13	13		22	**101**
Unknown	489	114	204	76	489	**1372**
Yemenis	2					**2**
Total	**2356**	**477**	**555**	**144**	**1887**	**5419**

Table 71: Groups Using Suicide Bombing in Yemen 2000– 2019 (N = 228)

Group/Target Type	Affiliation	Civilian	Competitor	Political	Other	Security	Total
Adan-Abyan Province of the Islamic State	Sunni - IS		5	4		17	26
Al Bayda Province of the Islamic State	Sunni - IS		1				1
Al-Qaida	Sunni - AQ					2	2
Al-Qaida in the Arabian Peninsula (AQAP)	Sunni - AQ	16	29	14	1	73	133
Al-Qaida in Yemen	Sunni - AQ	2		2			4
Hadramawt Province of the Islamic State	Sunni - IS	1			1	8	10
Houthi extremists (Ansar Allah)	Shi'a	1				1	2
Sanaa Province of the Islamic State	Sunni - IS	11	3				14
Unknown	Unknown	12	2	5	5	12	36
Total		**43**	**40**	**25**	**7**	**113**	**228**

Graph 30: Suicide Bombings in Yemen 2000 – 2019 by Target Type and Year (N = 228)



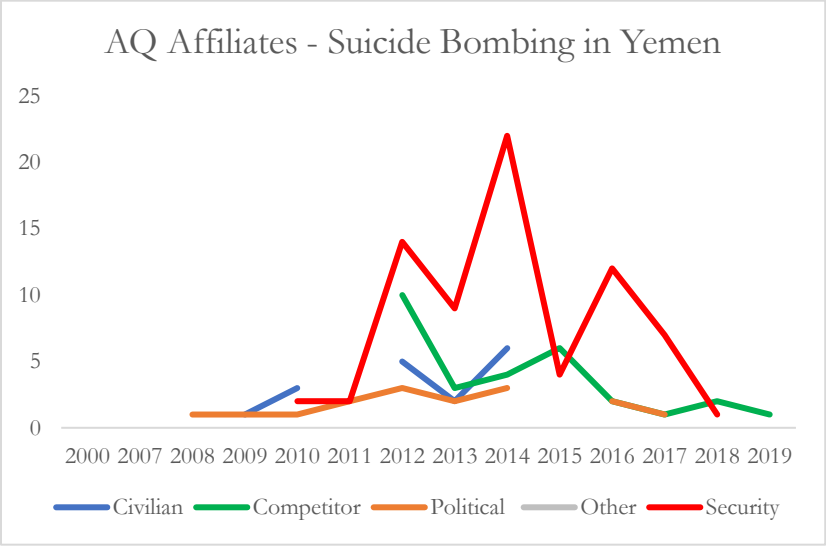
Analysis: For suicide bombings, one of the above tables lists each organization's affiliation, of which there are three: Sunni – IS, Sunni – AQ, and Shi'a. These are important distinctions, as nomenclature variations are accompanied by observable behavioral indicators that reveal who is using suicide bombing, what changes in its use might mean, and why such changes are occurring. These questions might otherwise not be answered, nor even answerable, if one were conducting a macro-level analysis.

The above tables and graphs indicate that whether suicide bombing was chosen as a means of attack or not, by 2014 civilians became the most targeted entity, followed by security targets (which were slightly dominant during the years prior). A clear shift in target prioritization is visible for the year 2014, but when looking at suicide bombing it appears security targets were almost always the preferred target set. In 2015, prioritization switched momentarily and civilians and competitors became the most targeted entities, while security targets fell to a slightly lower priority. In terms of competitors, it seems there was an intensity during 2015 in general, as almost as many targets in that set were attacked as were security elements, in terms of both suicide and non-suicide bombing. The question that seems to jump out is: *what was happening in 2014 and 2015?*

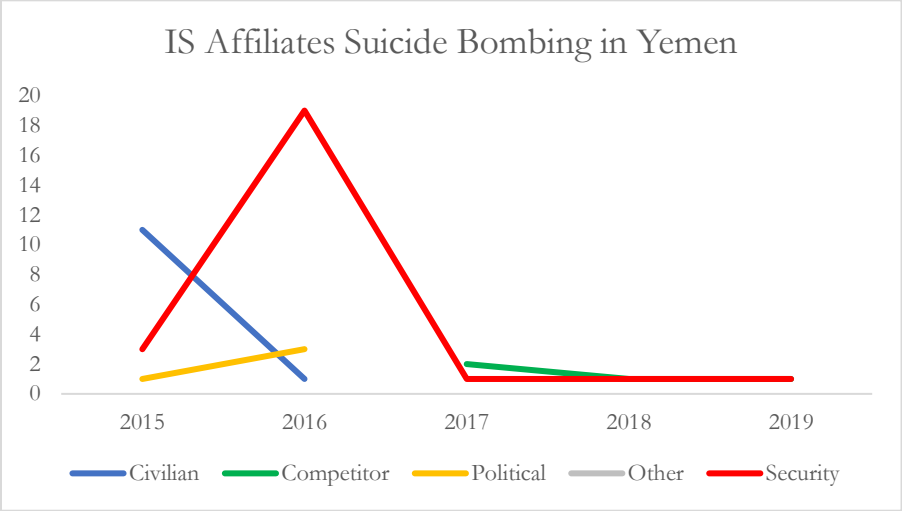
During most of 2014, suicide bombing attacks were mainly carried out by AQAP (Al Qa'ida in the Arabian Peninsula). During the last quarter of that year, both AQAP and Ansar al-Sharia (listed as a secondary attacker) focused their efforts on Houthis; civilians and armed competitors. This likely had to do with AQAP's creation of Ansar al-Sharia and the branding effort toward which it sought the latter's attention to be focused (Mapping Militant Organizations 2020).

AQ-affiliated entities (AQ, AQ in Yemen, and AQAP) accounted for about 61% (139 out of 228) of the suicide bombings in Yemen. They were active since 2000 and remained so through 2019. IS-affiliated entities (Adan-Abyan, Al Bayda, Hadramawt, and Sanaa Provinces of the Islamic State) accounted for about 22% of the suicide bombings in Yemen. They became active during 2015 and remained so through 2019. The Shi'a Ansar Allah attacked twice with suicide bombers (once against a bank in 2016 and once against a Saudi military ship in 2017), accounting for less than 1% (2 out of 228) of the suicide bombings in Yemen. The unknown attackers accounted for about 16% (36 out of 228) of the suicide bombings in Yemen.

Graph 31: Suicide Bombing – AQ Affiliates in Yemen



Graph 32: Suicide Bombing – IS Affiliates in Yemen



Analysis: AQ affiliates tended to attack security targets throughout much of their time in Yemen, which represented 54% (75 out of 139 of their attacks) of their targets. The years 2015 and 2018 were the exceptions, but since overall suicide bombing attacks were down in 2018 it serves a lesser purpose to divine why that was. In 2015, however, one can see that competitors (Houthis) were the preferred target set; even more so than security elements. When IS and its affiliates entered the violent marketplace in 2015, from March through September, the Sanaa Province affiliate began by nearly exclusively attacking multiple Shi'a mosques, with several suicide bombers being deployed to each location. During the last quarter of 2015, IS relied on its Adan – Abyan Province affiliates to launch multi-pronged attacks on security and competitor targets, while Sanaa and Hadrawmat Province affiliates did the same. During 2016, IS mainly discontinued attacking civilians, while that entity and AQ focused on security elements. This suggests that either there was a quiescent alignment, or the two jihadist entities came to a similar conclusion: attack the elements that presented the greatest threat to the cause.

Cut Two – ACLED Data

Descriptive Statistical Analysis of ACLED Data in Yemen

The ACLED data for Yemen covers a three-year period: (April) 2018 – 2020, which consists of 31,487 incidents. Prior to any modifications, ACLED data indicate that there were 6 suicide bombing attacks from 2018 – 2020. After implementing the additional coding rules, the potential count then rose to 426. However, after having applied my uniquely created removal/retention process, the final number consisted of 15 incidents involving suicide bombing (an increase of 150%). Due to the small number of incidents, an inferential statistical analysis is not possible. Nonetheless, this quantity afforded me the ability to look closer at those events that did transpire. The effort was not a waste, though the findings were minimal, as even a "non-finding" can be viewed as a finding in itself.

Suicide bombing cases included 4 incidents in 2018, 8 in 2019, and 3 in 2020. In 2018, two events were associated with AQ. In one, a seizure of two belts was made on a raid and in the other a security target was struck with an SVBIED as part of a combined arms operation. The two other incidents that year were unattributable and consisted of occasions in which there was doubt as to whether it was a suicide bomber or IED in one event, while the other could have been an accidental premature detonation. In 2019, 6 events were attributed to IS and 2 to AQ. For IS, 5 events were directed at competitor forces (4 times against AQ and once at pro-STC fighters), and 1 time at security forces (a pro-Hadi police station). AQ twice attacked security targets. In one event, two subjects in an SVBIED prematurely detonated while setting up to attack Shabwani Elite forces at a checkpoint. In another event, AQ attacked a UAE Elite forces unit with an SVBIED. During 2020, one attack was carried out by an unknown entity, on a motorcycle, against a UAE and Shabwani

Elite forces convoy. Interestingly, the other two incidents were foiled attempts by Houthis. In one event, they were engaged in battle with pro-Hadi forces and associated militias, and they sent more than one suicide bomber to attack. In another event, National Resistance forces shot 4 Houthis that were allegedly attempting a suicide mission.

The sum and substance of the ACLED data on suicide bombings suggests that during the 2018 – 2020 period Sunni forces found the tactic to be less useful, or they had been unable to muster the personnel to sustain a long-term, large-scale, campaign. At least in comparison to other conflict venues, and in light of suicide bombings within the Yemen battlespace, the evidence suggests a significant diminution of the tactic.[2] Shi'a forces, if the data is accurate, might be turning toward the tactic. However, this observation is *very* tentative, given the small number of observations.[3]

None of the above indicates that planted explosives, even in civilian areas, are somehow rejected, nor does it suggest that a reluctance to use them is palpable. Given the key terms that enabled me to consider 426 incidents, it was clear that most of the other explosive-laden incidents were IEDs, landmines, grenade attacks, and indirect fire incidents (in descending order of occurrence). The Houthis, or pro-Houthi forces, seemed to have been the most common group to

[2] Although there were few suicide bombings to consider, there were some interesting events that speak to the competition between armed participants. ACLED notes that the first observation of violence between AQ and IS occurred on December 19, 2018. AQ claimed to have killed 5 IS members, but ACLED did not take the claim seriously; logging 0 deaths. As noted above, this translated into suicide bombing attacks of AQ by IS during 2019.
[3] Recall that both GTD and ACLED revealed attacks by Shi'a entities. The former indicated one attack in 2016 and one in 2017, while the latter revealed two attacks in 2020.

use explosives, whether in battle with anti-Houthi forces or where they were generally left roadside for future detonation.[4]

Concluding Remarks

The forgoing analysis was drawn from two independent data sources, which when looked at separately, generated some interesting findings. The data reveal overall targeting patterns, which are different for suicide versus non-suicide bombing. From the GTD data, it is clear that AQ has generally exercised a penchant for attacking security targets, but had supplanted that target set during 2015 by attacking Houthi competitors. IS, began its suicide bombing offensive in 2015 by mainly attacking civilians, but by later that year, and especially by 2016, had shifted toward security and competitor targets. In terms of suicide bombing, but not attacks overall, both AQ and IS shifted away from civilian targets over time and had become more concerned with targets that would threaten their survival.[5] ACLED data confirms this general pattern, and extends it through 2020, with the added feature that IS did spend some time in 2019 attacking AQ, but the latter did not appear to reciprocate.

The GTD data reveal that the flow of violence had not abated by 2019, while both GTD and ACLED data independently show that suicide bombing had. Given the paucity of the practice, particularly after 2016, suicide bombing in Yemen has either become less popular, less practical, or both. This assessment supports the notion that suicide bombing, in some conflicts, might have a

[4] Oftentimes, the ACLED narrative named Houthis or pro-Houthi forces when describing the use of IEDs or landmines, while employing the following repetitive phrase: "Previous events using similar language suggest the use of a remotely detonated IED." This does suggest that the sources being used might have been biased. Nonetheless, I rely on ACLED to vet its sources, as they maintain their own internal review process, which I am not able to replicate.
[5] As was identified earlier, civilians were typically the preferred target set for all types of attacks; suicide and non-suicide.

shelf life, and that those who typically do not use the tactic (e.g., Shi'a insurgents) might sometimes engage in doing so.

Chapter 10: Conclusion

In the recent past, I recall watching a publicly available documentary that consisted of conversations with a variety of fighters belonging to IS.[1] During the course of the film, an interview was conducted with one local member in a leadership position, who had been accompanied by his wife and small children. The man said that if he needed to personally conduct a suicide bombing, he would do so without hesitation. Shortly after that interview, as the camera focused on a building the fighters were attempting to take, the man ran into the building yelling "Allahu Akbar," while self-detonating. He did this for just one building. It wasn't a strategic strongpoint or an enemy base. It was just a single structure for which members of both sides in the conflict were engaged in close-quarters combat. Having just "met" his family through the television screen and having observed his affection for his spouse and children, it was shocking to see the ease with which he enthusiastically sought to hasten his own death. This was not a man who was responding to some foreign occupation or avenging the death of a loved one. He and all whom he had fought alongside were each wearing suicide vests for the sole purpose of bringing into existence a new world order: *the* Islamic State.

Suicide Bombing's Lead Practitioners: The Islamic State Exudes Dominance

> Although AQ had no qualms justifying their *irhab* (terror) against their enemies as being lawful in Islam, they nevertheless projected themselves as regretful terrorists. They championed the causes of the underdog and saw themselves as their defenders, whereas IS sees nothing regretful about its actions, and the underdog theme seems to have taken the backseat in its discourse. If the underdog wants to be saved, s/he has the obligation to emigrate (*hijra*) to the Islamic State where s/he can aspire to be the bully and do unto others what s/he did not want others to do unto her/him.
>
> - Nelly Lahoud (2016, 32 – 33)

[1]This may have been a 2014 *Vice News* documentary titled, "The Islamic State."

It is impossible to discuss suicide bombing in a number of the combat venues I had analyzed without focusing on IS[2] itself, which deserves its own analysis for its role as a major regional NSAG. The so-called "Islamic State" is known in the Near East region in acronym form as "Daesh," which is roughly translated from Arabic as the Islamic State in Iraq and al Sham (Greater Syria; which may include the Levant- Lebanon, Jordan and Israel). The entity's chosen name reflects the image it routinely projected: *The* Islamic State, for which no other entity may lay claim to such a title. Battlefield dominance was an essential pillar of IS's strategy, which was buttressed by the incorporation of suicide bombing at each level of war.

During the course of this dissertation, I looked at targeting preferences by some of the leading suicide bombing organizations, with a specific focus on NSAGs that seek to wrest control of territory from an incumbent regime. Operating as a robust transnational insurgency, the IS hybrid regional army[3] is deserving of intense analysis for two distinct reasons. First, the sheer quantity of attacks attributed to the organization is known to exceed that of all others and its positional strength among other insurgent groups has proven it to be a force with which to be reckoned. Secondly, few groups have demonstrated the capacity to grab so much territory and hold it for a substantial period

[2] I had initially contemplated using the acronym ISIL, for its broad general use, its consistency with the GTD database and because doing so avoids crediting the organization directly with its claim to statehood. The group generally calls itself the Dawla (state), but disdains the popular Middle Eastern use of the term "Daesh" as it sounds too similar to the Arabic term for being run over or crushed (Hall 2015: 1-8). For reference, however, it should be noted that Benjamin Acosta's SAND dataset uses the name "Dawla," but I convert the naming convention in the body of my work for the sake of consistency. If any of the above acronyms are inadvertently interchanged, it would typically stem from citations of others' work (e.g., "ISIS").

[3] Stern and Berger (2015: 11) refer to IS as a "hybrid terrorist and insurgent organization," with which I agree in principle, as a means to call attention to their blend of jihadist terrorism as a major feature of their insurgent military composition. I also agree with Lina Khatib (2015: 3) that they may be referred to as a "hybrid jihadist group." Boaz Ganor (2015) regularly refers to this organization and others (e.g., Hamas and Hezbollah) as a "hybrid terrorist organization." See chapter 5 (73 – 83) for a definition and discussion. Peter Krause (2018b) notes their composition as a triumvirate of a state (collecting taxes and providing services), an insurgency (revolting against multiple sovereign governments) and a revolution (in its desire to revise the societal status quo on ideological grounds). Kalyvas (2015) seeks to downplay the organization's religious nature by terming them a "'revolutionary' armed group" (42). He later carries this logic even further in search of a comparison to Cold War Marxist insurgencies (Kalyvas 2018).

of time (despite eventual losses). These two factors combined make IS unique – at least within the Iraq and Syria battlespaces, but elsewhere for the manner in which they transformed the way suicide bombing has been used (Tveteraas 2022). As Pollack (2020: 498) notes:

> One of the more interesting Da'ish [IS] innovations has been their integration of suicide bombers into conventional military operations. Da'ish uses suicide bombers (both car/truck bombs and people wearing suicide vests) as a simple version of a precision-guided munition. The local Da'ish commander designates a target and the suicide bomber goes and tries to blow it up. While not terribly sophisticated, they were the first to think of doing this, and it has been an important part of their tactical operations, both attacking and defending.

Although AQI and its successor, ISI, had experienced defeat in Iraq prior to the negotiated departure of American combat soldiers by the end of 2011,[4] the resultant power vacuum could have been filled by the Iraqi government. However, post-2011 state-led (Shi'a-dominated) violence enabled a resurgent Sunni insurgency to establish itself yet again (Crenshaw 2017: 65 – 66; Karsh 2015: 125 – 129; Khatib 2015: 8 – 9; McCants 2016: 42 – 45, 125 – 126; Moyar 2015: 89; Weiss and Hassan 2015: 82 – 98; Lister 2016b: 55; Pollack 2020: 492 – 493). This, combined with the situation in nearby Syria (Zelin 2017; Cockburn 2015), enabled AQI/ISI to blaze a new, and more gruesome, path. As it did so, it demonstrated its ability to engage in highly sophisticated operations in ways that mimicked an established state military's skillset (Whiteside, Rice, and Raineri 2021).

[4] The SOFA (Status of Forces Agreement) between Iraq and the U.S. called for American troops to be redeployed internally, "from Iraqi cities, villages, and localities" (article 24, section 2) by June 30, 2009 and to withdraw entirely by December 31, 2011 (article 24, section 1). The agreement was brokered by U.S. President George W. Bush's administration and was due to take effect after his presidency. His successor, Barack H. Obama, therefore inherited the withdrawal of American forces, which was consistent with his own political proclivities on which he campaigned. However, the agreement could have been renegotiated at various points during the Obama administration, so as to retain a small, yet significant, American military presence (Brennan, 2014). President Obama appears not to have been enthusiastic about the prospect of American soldiers on Iraqi soil and Iraqi Prime Minister Nouri al Maliki appeared to be content with this outcome. For a rather fair assessment of the debate about who was responsible for the American withdrawal, see http://www.factcheck.org/2015/08/bush-clinton-play-blame-game-in-iraq/.

Despite the politically popular (and somewhat factual) notion that AQ was "on the run" and the fact that Osama bin Laden was dead (Obama 2012), by early 2012 it was already clear to the U.S. Intelligence Community (IC) that the "global jihadist movement" continued to evolve and the ideologically-based, transnational threat was not expected to attenuate (Clapper 2012).[5] Indeed, over the course of the next year it not only failed to diminish, but AQI/ISI had continued its attacks in Iraq (Clapper 2013).[6] The pattern of increasing violence and its transnational expansion in the form of a building insurgency continued throughout 2014 (Olsen 2014)[7] and 2015 (Rasmussen 2015).[8] The specter of global jihadism was proliferating, not abating, and this was patently clear in Iraq (and elsewhere). Indeed, as I have shown, the recorded instances of violence illuminate this trend.

Key Distinguishing Organizational Feature: Matching Tactics to Strategy

Considering IS's ability to match tactics to strategy, its operational-level skill set, requires a brief review of how the organization has carried out its objectives. Similar to the observation made

[5] In his capacity as the DNI (Director of National Intelligence), Mr. Clapper's position at the helm of the IC was not only codified through the creation of the Office of the Director of National Intelligence (ODNI), but his duties statutorily enumerated his role as the person in charge of issuing the President's Daily Brief (PDB). His testimony before the U.S. Senate in open session is deemed here to be both a definitive IC threat assessment and a representation of the president's incoming threat-stream reporting.

[6] On October 31, 2013, White House Press Secretary, Jay Carney, noted with regard to IS that, "Iraqi security forces are confronting an increasingly large, sophisticated and well-armed ISIL network, which is able to mount coordinated and complex attacks" (Carney 2013). According to the next day's official press release, a "senior Obama administration official" reported that Iraq's Prime Minister Maliki would be meeting with President Obama to discuss IS, as a "'transnational threat network,'" whose scale of violence and depth of penetration in Iraq was known to the official to be increasing (Plus Media Solutions 2013). To be fair, the president may have written off Maliki's threat appraisal as an artifact of his Shi'a sectarian perspective. Nonetheless, it is significant to note that a senior Obama administration official's awareness of the changing threat landscape coincided with (the above cited) IC assessments (see White House Press Release 2013).

[7] During his testimony before the Senate Foreign Relations Committee, Matthew G. Olsen, then-Director of the National Counterterrorism Center (NCTC) serving under the auspices of the ODNI, highlighted the intensifying regional threat that IS and AQI both represented. He also discussed the major battlefield gains that IS had made in Iraq and summarized by saying, "our concerns with the threat posed by ISIL to our interests in the region are currently growing, not diminishing." These assessments were in stark contrast to President Obama's off-the-cuff remark that ISIL was akin to a "Jayvee team" (Remnick 2014). The president's desire to diminish the severity of the threat, through semantics, seemed to have mirrored George W. Bush's Secretary of Defense's refusal to admit that an insurgency was afoot in Iraq (Nagl 2014: 118; Warrick 2015: 115 – 116).

[8] Then-Director of NCTC, Nick Rasmussen, reiterated many of the points made by Olsen in his 2014 testimony, as he testified to the growing threat that ISIL had come to pose.

in the Syrian battlespace, when evaluating the Iraq data, it becomes clear that many of the attacks under review were either unattributed or otherwise unclaimed. This likely has something to do with the fact that the organization spent considerable time conducting shaping operations and battlefield preparatory strikes (Knights 2014).[9] It has also been a key feature of the historical branding difficulties AQ and IS have experienced, dating back to at least 2006 (Fishman 2016: 110 – 111).[10] The data I encountered reveal that at a certain point, claimed and attributed attacks rose as the organization's strength and popularity grew. In short, the fundamental claim to be *the* "Islamic State in Iraq and the Levant" as a means to re-claim a (real or imagined) past greatness was matched with a ferocity of instrumental tactical innovations that served to advance the group's land-grabbing, and land-retention, capacity.

One innovation that truly distinguishes IS from all forerunner organizations is the degree to which they incorporate suicide bombing into their arsenal (Cockburn 2015: x).[11] They do so not only from the standpoint of equipping large vehicles with explosives and drivers who happily seek to die as they are detonated for shock value, but with every operator being able and willing to detonate on

[9] Knights notes on 2 that "ISIL did not suddenly become effective in early June 2014: it had been steadily strengthening and actively shaping the future operating environment for four years." That the organization actively concealed its true strength has been admitted by its leadership on more than one occasion during its historical development. For instance, Zarqawi sought to delay the announcement of its group for a year as did al-Baghdadi (2016: 25, 22, respectively).
[10] Fishman also notes AQ's sensitivity to its brand, as it pertained to Zarqawi's actions and the formulation of the temporary MSC (Mujahideen Shura Council) (79).
[11] For clarity's sake, I do not adhere to the notion that suicide bombing is caused by factors exogenous to the organization, such as foreign state intervention, occupation, impoverished conditions, lack of education, perceived humiliation, etc. Although I deal with this matter elsewhere in the dissertation, it is worth reminding the reader that I apply a very simple logic: organizations choose tactics for a variety of reasons, not necessarily dependent on others' imposition of a territorially dominant condition, although quite probably related to operational-level force-on-force considerations, as well as unique cultural proclivities. Therefore, they apply these tactics in different ways against different target sets. In short, just as murderers choose to murder and robbers choose to rob, the search for external sources that caused their decisions to do either seem to be exercises in blame-casting. This is not to say that others have no impact on their menu of behavioral choices, but that bad people choose to do bad things is a function of decisions they *themselves* have made in lieu of other options that were available (or may have later become available) to them.

demand (and without orders to do so), as a means to overcome obstacles they encounter in battle.[12] The significance of the embedded quality of suicide bombing in their fighting style is that it far exceeds previous practitioners' use of a similar tactic (although perhaps not the LTTE, but certainly on a grander scale). Indeed, it is because they use this technique overwhelmingly for military purposes that its significance on the battlefield should be interpreted as a major force multiplier. In short, for IS, suicide bombing isn't simply *a* tactic, but *the* tactic differentiating the degree and nature of its use in comparison to other groups who have used it. Suicide bombing is a core component of their strategy, even though this unique attack type does not itself constitute a strategy.

Key Distinguishing Organizational Feature: Power Projection

To begin with, during their ascendance IS focused their strategic messaging on their battlefield success (Kuznar 2015); even while losses were continuously mounting (Winter 2017b).[13] As Zelin (2014: 7) notes, they were "not only talking the talk about establishing an Islamic state, [they were] walking the walk." To this he attributes the notion that success advances the twin interests of maintaining and increasing the recruitment of foreign fighters to their cause. Thus, one might say that conquest produces demonstration effects that bolster an organization's profile and potentially moves their agenda forward. As Dershowitz (2002: 6) reminds us: "success breeds repetition."

[12] See Nance (2016: 344-366) for various points regarding IS's tactical prowess, along with the resultant inefficiencies that accrue to their disadvantage. Although Nance's book is written in an amateurish fashion, it does contain useful information and insight.

[13] In many ways, the capacity to capitalize on success through propagandistic means has bolstered not only IS's public image, but the organization has been able to do so in such a way as to set it apart from its competitors. I draw, in part, on the remarks made by NYPD's Deputy Commissioner of Counterterrorism, John Miller's remarks at the Northeast Regional Intelligence Group (NRIG) Conference, which I attended from June 16 – 19, 2015 in Jersey City, NJ. In fact, as Ligon et al (2012) note, the group has demonstrated its ability to re-brand itself as the new and improved product, with highly lethal results.

Although it is beyond the general scope of this dissertation, IS, similar to, but more effective than AQ, was able to project power abroad. Of note was its capacity to execute or inspire others to carry out terrorist attacks in the West. This is a remarkable feat for a regional insurgent organization that was fully engaged in overlapping multi-state wars. Although AQ did demonstrate a capacity to inflict damage beyond its immediate sphere of influence, the post-9/11 qualitative advantage of terrorism,[14] the pace, variety and intensity of IS's attacks in Europe seemed to have far surpassed those of AQ (with the obvious exception of 9/11); at least contemporaneously. Even still, IS's primary focus has been centered on territorial conquest in Iraq and Syria, which differentiates its strategic vision from AQ's more globalist long-range agenda (Byman 2015; Novenario 2016; Lister 2016b; Laghmari 2019)[15]. This is not to say that AQ's thought leaders didn't contemplate a similar vision during the Zaraqawi era of its Iraqi sojourn (Fishman 2016: 73). Nonetheless, as Byman (2015: 169) observes, "IS shared AQ's long-range vision, but it chose to compete with it through violence. The Islamic state and Al Qaeda are competing to be the dominant organization within the modern jihadist movement." This was accomplished within-theater, despite what IS may have done beyond-theater.

[14] As Braniff and Moghadam (2011) note, "… the aggregation of Al-Qaeda's adaptations since 9/11 has brought about an evolutionary change in the landscape of anti-Western Islamist militancy, ushering in an era of global jihadism beyond Al-Qaeda."

[15] In terms of extra-territorial power projection, an important caveat to this argument, and one germane to this dissertation, is the point that Watkins (2016) makes. He suggests that IS's loss of territory was highly correlated with attacks that were carried out in the West on their behalf (some inspired, some directed and some that were opportunistically claimed). The argument seems to intimate that mounting evidence of in-theater territorial weakness generates a need to demonstrate strength beyond the theater of combat. This is interesting as it depicts the organization as one that lashes out externally when faced with the prospect of major territorial losses. If carried to its logical conclusion, one might reasonably expect that the cessation of attacks on the West indicates a crossover point, which signals the terminal phase of its organizational death throes. Logically, one might then ask if it is truly out of business as an ambitious land acquisitive threat at that point. However, in contradistinction to Watkins, Crenshaw (2017: 67) notes that "The deadly December 2015 attacks in Paris, for example, were in the planning stages before ISIS began to suffer defeats on the ground."

The above factors combined set IS apart from its peer competitors and posed real challenges to the sovereignty of the states against which it directed its energies. Indeed, winning battles against a numerically superior force and using the spoils of their operational victories (e.g., Mosul) cleared the way for them to advance successfully on subsequent objectives (e.g., Ramadi). As Krause (2018b: 8) notes, "The capture of Mosul and retreat of the Iraqi army helped provide ISIS with the tools it needed for the group's most deadly and effective tactics: massed suicide bombings." This was also the means for sustaining territorial control, specifically for defending it against a state-led bid to recapture it (Winter 2017a; Tveteraas 2022).

The degree to which IS was able to capture large quantities of military hardware in a swift and sustainable manner represents the group's capacity to move rapidly through the stages of guerrilla warfare, as it compensated for its initial asymmetric disadvantages. Thus, the organization achieved a greater degree of symmetry (if not temporary parity) with incumbent military forces and simultaneously became the most robust competitor organization vying for a (sizable) share of sovereignty. In short, adapting to and shaping the battlefield was the net strength for IS, which they heavily bolstered with suicide bombing across theaters.

As Byman (2015: 169) observes, "IS shared AQ's long-range vision, but it chose to compete with it through violence. The Islamic state and Al Qaeda are competing to be the dominant organization within the modern jihadist movement." Indeed, "By establishing the Islamic State, ISIS has fulfilled [AQ's then-present leader] al-Zawahiri's condition while it is fighting his authority over the jihadist camp" (Karmon 2015: 76). Lister (2016b:65) notes, "Although both al-Qaeda and ISIS have the same ultimate objective – the establishment of a global Caliphate – they have adopted and

refined markedly different strategies for reaching that point." The difference between the two was that while AQ re-branded and reduced its use of suicide bombing, IS did not.

Returning to the Six Operational-Level Hypotheses: What has Been Learned About Suicide Bombing?

In each chapter, I considered a null hypothesis and 6 unique hypotheses. The null hypothesis, H(0), I tested in each case was that there is no relationship between any of the given variables, whereas the alternative hypotheses that were tested were as follows:

Ha(1): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and the number of bombers used to attack it.

Ha(2): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether combined arms are used to attack it.

Ha(3): I expect there to be a relationship between the PCT (Physical Challenger Threat) posed by the target of a suicide bombing and whether a vehicle is used to attack it.

Ha(4): I expect there to be a relationship between the use of combined arms and the number of suicide bombers used to attack a target.

Ha(5): I expect there to be a relationship between the number of suicide bombers and whether a vehicle was used.

Ha(6): I expect there to be a relationship between the use of vehicles and whether combined arms were used to carry out a suicide bombing.

Table 72: Inferential Statistical Analysis (Rejected/Accepted Hypotheses) Summary

Hypothesis/Battlespace	**Syria**	**Iraq**	**Afghanistan**	**Nigeria**	**Yemen**
H(0) PCT/#bombers	Rejected	Rejected	Accepted	Rejected	N/A
H(0) PCT/Combined Arms	Rejected	Rejected	Accepted	Rejected	N/A
H(0) PCT/Vehicular	Accepted	Accepted	Rejected	N/A	N/A
H(0) Combined Arms/# Bombers	Rejected	Rejected	Rejected	Rejected	N/A
H(0) # Bombers/Vehicular	Rejected	Accepted	Rejected	N/A	N/A
H(0) Vehicular/Combined Arms	Rejected	Accepted	Accepted	N/A	N/A
Ha(1) PCT/#bombers	Accepted	Accepted	Rejected	Accepted	N/A
Ha(2) PCT/Combined Arms	Accepted	Accepted	Rejected	Accepted	N/A
Ha(3) PCT/Vehicular	Rejected	Rejected	Accepted	N/A	N/A
Ha(4) Combined Arms/# Bombers	Accepted	Accepted	Accepted	Accepted	N/A
Ha(5) # Bombers/Vehicular	Accepted	Rejected	Accepted	N/A	N/A
Ha(6) Vehicular/Combined Arms	Accepted	Rejected	Rejected	N/A	N/A

Note: N/A = Insufficient Data for Inferential Statistical Analysis.

Findings

The results of my study indicate that suicide bombing is a tactic about which generalizations are difficult to make. I learned that its study is best served by looking at the various places in which it is used, by whom, toward what targets, and whether its use changes when the entities are operating in different combat environments. I was able to learn more about organizational behavior by analyzing these distinctions; especially when considering relationships between variables such as combined arms, the number of bombers, vehicular use, and a Physical Challenger Threat (PCT). An initial glance at the above table makes it clear that uniformity did not attend the use of suicide bombing across conflict dyads.

I also learned that the data collected and coded by the GTD and ACLED sometimes produced a mutually reinforcing picture, but sometimes it did not. Using a fine-grained approach toward the data allowed me to see where the study of suicide bombing could be deficient, but more importantly how it could be improved. I found that the GTD does a better job at identifying suicide bombings, whereas ACLED is able to pull in more data, but with less robust coding for the same.

Suicide Bombing by Battlespace and Practitioner

Across each battlespace, there were clear differences between suicide bombing practitioners, but there were also some distinctions that could be observed within a few entities' Tactics, Techniques and Procedures (TTPs). For example, in Syria, I had been able to tease out the differences between two primary combatant organizations that were competing for dominance within the battlespace. IS focused its suicide bombing efforts on the elimination of competition,

whether state or competitor threats, but did very frequently attack civilians. This behavior supports the conclusion that battlespace dominance was comprehensive and not simply a matter of pure "guerrilla warfare" (security-centric targeting), nor pure "terrorism" (civilian-centric targeting).

With regard to al Qa'ida's iterations as AQ, AN, and HTS, some distinctions were observed. AQ was generally most prone to attack (mostly stationary) security targets in Syria. When the organization became AN, the general trend was to attack security targets, but there was no particular precaution taken to protect civilians, and they did tend to attack Shi'a civilians. HTS eventually became more interested in using suicide bombing against state security threats, but not competitors. As an organization, it seems to have recognized the limits of civilian-centric targeting, as well as perhaps the absence of a need to attack its co-sectarian NSAG competitors. Instead, HTS appears to have been interested in building an image of an entity that was fighting in a more guerrilla-like fashion, which was more oriented toward undermining the state's capacity and legitimacy.

In Iraq, the entity that was most known for using suicide bombing was Islamic State (IS). I found that they used it as a means to conquer, dominate, and defend their Area of Operations (AO). This finding is supported by the fact that the organization did not use suicide bombing as an exclusive means to defend themselves under conditions of despair or heavy territorial loss, or as a way to solely terrorize civilians. Rather, it was an essential tool for engaging in "guerrilla warfare" and it was mainly directed, often with multiple bombers and within a combined arms approach, against targets that could pose a threat to their organizational survival. I also found that even when rates of success were as poor as 50%, the use of suicide bombing did not diminish. That is, the prospect of failure had no discernable impact on the decision to use suicide bombers at the

operational level. On the surface, this would seem to defy rational expectations. Yet, the persistence of the practice seems to have been so embedded in the group's organizational culture that to discontinue its use may have been viewed as an elimination of one of the most powerful tools in their arsenal.

In Afghanistan, the main suicide bombing practitioners were the Taliban, followed by a later foray by the Khorasan Chapter of the Islamic State (IS). It took the Taliban several years for a security-centric targeting preference to emerge; both with suicide bombing and non-suicide bombing attacks. Political targets sometimes dominated their preference scheme, but in general they had attacked fewer civilian targets over the course of the conflict. For the Taliban, the data indicate that organizational survival and diminishing regime fighting power tended to be prevalent aims, which lends credence to the notion that once the former incumbents strengthened their role as powerful insurgents, they aimed for a "guerrilla warfare" victory that did not isolate it from the civilians over whom they desired to rule (again). Similar to HTS in Syria, the Taliban's evolution seems to indicate that a limitation for civilian-centric targeting was self-imposed. Consequently, a bid for organizational survival and longevity was predicated on the diminution of state forces and the advancement of an image of a legitimate player in the struggle over sovereignty.

When comparing the Taliban to IS in Afghanistan, the prioritization of targets was distinct. IS seemed to have been fighting for a place of prominence among well-established insurgents (the Taliban). This condition was very different from their experiences in Syria and Iraq, where they dominated the cross-border battlespace as the main insurgent force. Consequently, one can see from their targeting preferences over time, that for non-suicide bombing they preferred to attack civilians,

yet with suicide bombing they behaved differently. Specifically, IS had targeted more security targets in 2017, but by 2018, their order of preferences was political first, civilian second, and security third. In short, a steady rise in political and civilian targeting ("terrorism") was accompanied by a decline in security targeting ("guerrilla warfare") in Afghanistan.

In Nigeria, the main insurgent organization, Boko Haram/ISWAP, was operationally committed to using suicide bombing mainly as a means to attack civilians ("terrorism"). Even when security elements were engaged with suicide bombing, they tended to be stationary versus mobile. This suggests that battlefield dominance was not the overarching goal. This makes sense, as the war Boko Haram/ISWAP fought hinged more on establishing sectarian distinctions, with a limited territorial aim. When a rise in security targeting was observable, it did (at least in 2015) coincide with a brand-bolstering effort that may have been aimed at fortifying a partnership with IS. During 2019, the group did emphasize security targeting, but it was a short-lived pursuit and seemed to be narrowly focused on a uniquely tailored offensive in the Lake Chad region against regime Forward Operating Bases (SB Morgen Report: 2019: 9). In other words, a threat to the insurgency's physical security became a priority for elimination/reduction.

In Yemen, the primary entities engaged in suicide bombing were AQ and IS. They both exercised an apparent preference for attacking security targets, but AQ re-directed their attention in 2015 toward eliminating/reducing Shi'a sectarian competitors (Houthis). That same year, IS began its initial civilian-centric targeting campaign, but quickly switched the next year to a heavy focus on security targeting. They further extended their targeting to include AQ competitors, which was not reciprocated. During the 2018 – 2019 timeframe, it was interesting to observe that although violence

was ever-present, even rising, suicide bombing for all entities was no longer very prevalent. One might speculate that suicide bombing ran its useful course in that combat theater.

The Wrong Metric: Rates of Suicide Bombing Success and Failure

In thinking about how a rational, self-maximizing, organization that uses suicide bombing might advance its survival, longevity and dominance, I had in mind a couple of overarching hypotheses. Rather than explicitly state them at the outset, due to my desire to focus more closely on the literature that supported a formative theory, I retained them for the conclusion chapter. The two hypotheses I had in mind acted as a guidepost for thinking about indicators of an adaptive quality that hinges on an aversion to failure. They were as follows:

H1: As suicide bombing operations become less successful (fewer individuals seeking to explode themselves achieve an explosion), the rate of suicide bombing should diminish significantly over time.

H2: As suicide bombing operations become less successful (fewer individuals seeking to explode themselves achieve an explosion), a noticeable shift in targeting should follow.

The general findings for each of the broad hypotheses was that there was substantial evidence that *H1* could not be supported. That is, the success rate for suicide bombings (with the possible exception of the Haqqani Network in Afghanistan), did not determine whether its use would be continued or discontinued. In general, when an entity was committed to carrying out suicide bombing operations, a rise in failed and foiled attacks did not dissuade them from using it.

With respect to *H2*, there was some evidence that the success rate for suicide bombings would generate a noticeable shift in targeting, but there were some nuances that I discovered. In each case, what I unpacked in looking at the targeting behavior was that adapting to meet threats was only part of the calculus, whereas shaping the conflict was also an apparent consideration.

For both *H1* and *H2*, when groups that use suicide bombing experience diminishing rates of success, it seems that neither a reduction nor a target change obtained. Even when rates of success were generally high, as in Yemen, suicide bombing waned significantly. This did not coincide with a diminution in overall violence. Therefore, the inference to be drawn is that internal organizational decisions were a, possibly the, causal factor generating a reduction in suicide bombing. Collectively, the hypotheses are supportive of my general proposition that organizations that choose to use suicide bombing are not necessarily impacted by the prospect of a strong foe (e.g., host nation, intervening state, or occupying force) wielding its might. Rather, the practice retains its usefulness so long as the NSAG deems it to be integrative to its repertoire of violence.

Concluding Remarks

Jackson et al (2005: 18) wisely observes that "The more tactics a group has in its repertoire – from bombings to firearms attacks to kidnappings to unconventional weapons – the greater its flexibility and operational freedom." For NSAGs, I would add suicide bombing to that list. In this dissertation, I have analyzed the behavior of a number of violent non-state entities who use suicide bombing, as I explored between-group distinctions and within-group variation across several conflict zones. Notably, suicide bombing organizations are not uniform in their use of the tactic. There is variety in the way they wield it, which is best observed by disaggregating target sets,

allowing the analyst to consider the allocation or re-allocation of targeting preferences. I have developed a theory on the basis of organizations' need to adapt to threats or shape elements of a conflict, depending on the process goals of the entities involved and the attendant conflict dynamics they face.

In places such as Iraq and Syria, suicide bombing was a key component for some NSAGs. IS managed to use it with great zeal as they fused it to their operational-level planning for offensive and defensive armed engagements. This process facilitated their dominance of the battlespace against both security and armed competitor target sets, as it enabled them to adapt to threats and shape the battlefield to their advantage. In Afghanistan, IS sought to project its power into the theater by advertising their presence; thus, attempting to shape the battlefield in which a superior armed competitor force was present. In that realm, the well-established Taliban had emerged from an evolutionary cycle that was more threat-centric in its focus; thus, adapting to their environment in a way that better positioned it for eventual rule over the territory and people.

In other venues such as Nigeria and Yemen, a different picture of suicide bombing's use emerged. In Nigeria, Boko Haram/ISWAP used suicide bombing as a means of shaping the battlespace in a specific way, as it focused more on a civilian-centric target set. In Yemen, while IS vacillated between target sets, AQ progressed in ways it had in Syria. They opted to discontinue civilian targeting that was geared more toward shaping the conflict on sectarian grounds and instead leaned in the direction of adapting to counter threats to their survival.

Implications for Exploratory Research, Epistemological Development, and Policy

This dissertation was conducted as an exploratory effort that was aimed toward a theory-building enterprise that encompassed the use of suicide bombing as an operational-level tactic, as opposed to one that represents a fully developed strategy. Having reviewed the status of the field of study, I was unsatisfied with its progression and sought a means to advance it. My approach for accomplishing this task was to exploit the strengths, and strengthen the weaknesses, of two separate datasets (GTD and ACLED). I did so by providing both descriptive and inferential statistical analyses; the latter for which I generated evaluated variables that were heretofore absent in the field. My analysis hopefully brought to light the differences one might not otherwise observe had only one database been considered. Furthermore, it supports the notion that a trained analyst might have to go much further than one might expect, in order to extract meaningful behavioral patterns at the organizational level of analysis.[16]

The experiences I had with the databases enabled me to learn more about *how* suicide bombing was being used, which made it easier to uncover some of the reasons *why* its use varied within and between conflict spaces, among organizations that accept its legitimacy. My work appears to have made a modest contribution in that regard. Nonetheless, there are areas that I feel the inherent scope and space of this project have left unexplored.

[16] In Syria for instance, the GTD data, in its original form, revealed that HTS attacked more civilians (less threat actors) than ACLED data, in its original form, had revealed. Both databases covered the same period in the case of HTS, so it is a bit surprising that GTD recorded 6 civilian attacks and ACLED recorded none. Understanding how the two databases are constructed reveals why. As has been mentioned, ACLED does not include directionality and therefore fails to allocate responsibility. It also doesn't code for target types. Therefore, even though ACLED collects more data points, it seems to do so while sacrificing a number of useful variables that tend to reveal patterned behavior by specific actors.

Throughout this dissertation, I had often broached a theme associated with territorial control and whether it was a central factor in determining which targets would more likely be attacked. I think that there is a great deal of work to be done in this area, which might build upon some of the incipient scholarly efforts I had identified on the various occasions that I did approach the topic. This is so not only for suicide bombing, but for other tactical choices made by NSAGs in general. Additionally, using more finely grained data to illuminate the points within tactical engagements that certain types of violence are used would likely yield a better understanding of NSAGs' battlefield experiences and how they apply tactics across an operational environment.

Although I argue that suicide bombing does not represent a full-fledged strategy, future research would benefit from considering how various NSAGs shift their target sets over time and whether any perceived changes are indicative of a change in strategy. There might also be additional factors to consider more intensely, such as trigger events that lay beyond the scope of a target-centric approach, which give rise to a permanent discontinuation of the practice toward certain target sets. Examples would be decision directives from higher echelons of the organization, or the incorporation of alliance partners who do not value the practice.

In my earlier explanation of the Pape thesis, I identified the value of considering its contribution to the study of suicide bombing, but noted that its usefulness had been undermined by the unfolding of more recent events. I have observed a similar epistemological trajectory with regard to Bloom's outbidding thesis. Bloom used the term "outbidding" as more of a reference to jihadist groups (Hamas and Palestinian Islamic Jihad) using suicide bombing as a means to compete with each other by using it against the (mostly civilian and religiously dissimilar) targets in the state that

they both opposed (Israel). At the time, the NSAGs' actions dominated not only the headlines, but the entities' operational profiles. Thus, at the time it would have seemed correct to conclude that suicide bombing was a strategy rather than a tactic per se. However, the suicide bombing landscape has drastically changed since the Palestinians' well-publicized use since then.

In more recent insurgencies featuring suicide bombing, outbidding is more descriptive of an operational-level tactic geared toward achieving battlefield dominance against forces that pose varying degrees of threat to the organizations' survival. Oftentimes, these PCTs (physical challenger threats) have been state or state-sponsored, security forces, but rarely foreign invaders (contra-Pape). At other times, supremacy over competing NSAGs, many of whom were natural ideological allies, was the apparent aim of suicide bombing efforts. In other words, out-bombing the competition was also coupled with bombing them out of existence. These sorts of force-on-force activities place their actions within the realm of battlefield adaptation. In other uses of force, however, shaping operations were also apparent when suicide bombing was used against civilians of a different religious/sectarian orientation as a tool for generating or maintaining division. It was also used against those of the same religion, sometimes with identical sectarian features. In either case, terrorizing non-combatants who posed no conspicuous physical threat served similar ends.

During the past couple of decades, modern suicide bombing practitioners have overwhelmingly been Sunni Salafi jihadists. Treating any ideology, religion, political tradition, or attack-type propensity in monolithic terms, however, holds little promise for sound policy. Instead, decision makers would benefit from analytical work that assesses NSAGs in terms of distinguishable

characteristics that come more clearly into focus as a consequence of targeting priorities and how these may shift over time and across spaces.

Microlevel considerations, particularly when databases are constructed to accommodate the sorts of variables this dissertation introduced, can yield a more nuanced understanding of behavioral changes and the implications these might have. By this means, deducing NSAGs' dominant reasoning paradigm might clarify the menu of response options open to states who seek to counter them.

When observing changes in strategy or targeting preferences, analysts should consider a range of internal and external causal factors; both individually and in combination. For instance, internal organizational dynamics, such as branding/re-branding, alliance formation and dissolution, and the degree to which an entity sees suicide bombing as an essential feature of its organizational essence may wield considerable influence. Environmental factors, such as how well established an entity is within a given battlespace, whether the space is more permissible for a given target set to be attacked successfully, and what the competition for market share looks like, may also impact decisions about initiating or sustaining a given course of action.

Future conflicts involving the types of NSAGs that tend to use suicide bombing operations should be expected, as horizontal proliferation across conflict venues continues and as jihadists in general do not appear to reject the practice en masse. However, vertical proliferation might not be so easily replicable as not necessarily all groups fitting the "standard" profile type will automatically embrace the tactic. Even if they do so for a time, evidence suggests that there are limitations for its

use by some organizations, even those who use it with great frequency and intensity at a given time during their existence. Whether the tactic regains a place of prominence among future insurgencies or whether it is memorialized in the history books as an anomalous feature of a bygone era remains to be seen. In the interest of peace, states should prepare to counter its resurgence if they hope to expedite its extirpation as an operational-level tactic.

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